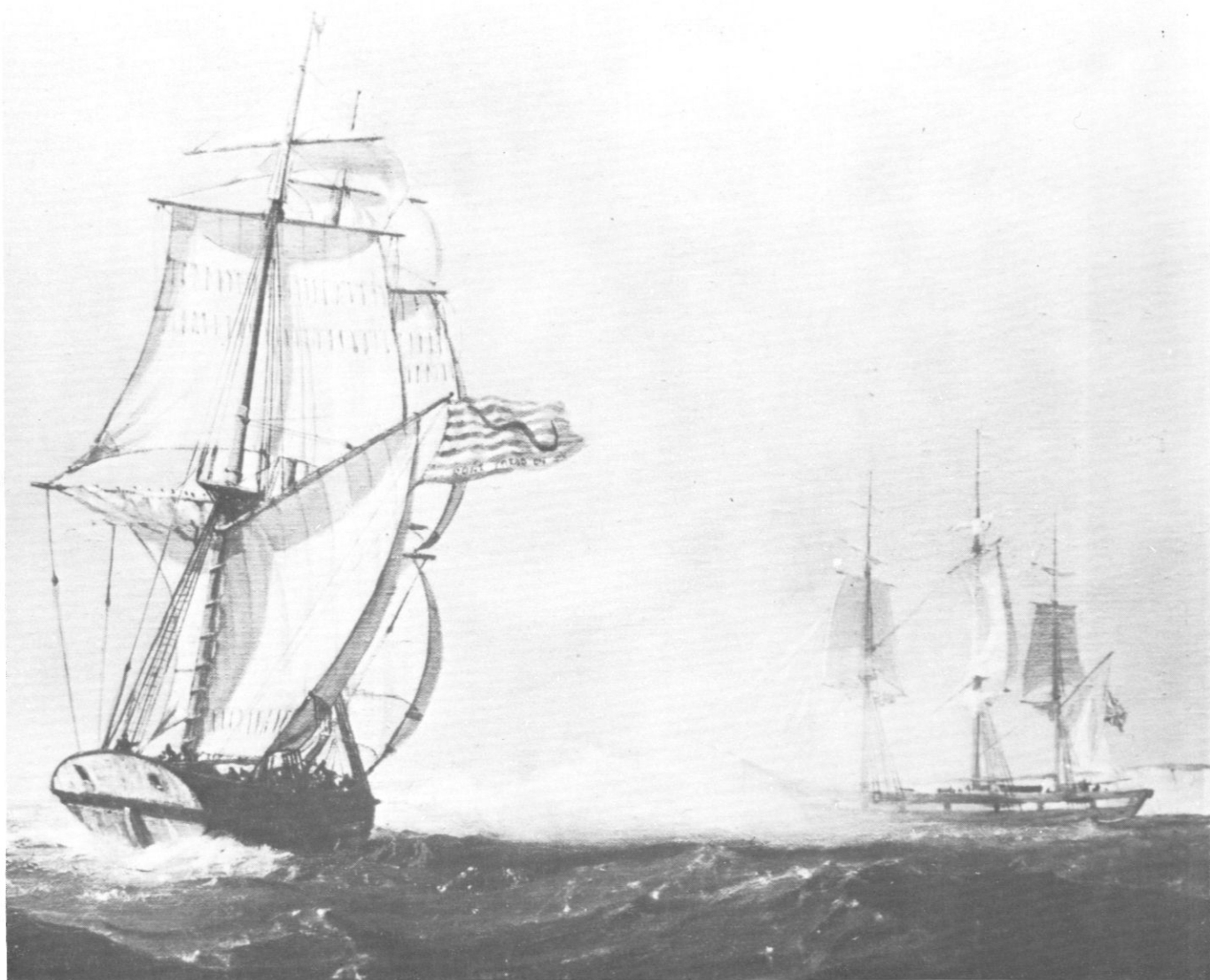




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Credits: All pictures are Official U.S. Navy Photographs unless otherwise indicated.

The front cover photograph of a painting by Mr. John P. Benson, Kittery, Me., depicts USS REVENGE (1777-78) in action in the English Channel, under the command of Captain Gustavus Conyngham in 1777-78.

The picture on page 2 was taken on 15 Mar 1972 at the Dedication Ceremony for the ADM Joel T. Boone Clinic in Little Creek, Norfolk, Va. Assisted by VADM George M. Davis, MC, USN, Surgeon General, Mrs. Boone unveils a portrait of her husband, VADM Joel T. Boone, MC, USN (Ret.). (See pages 13 and 15.

The continued support of Ms. S.B. Hannan, BUMED Code 2133, and the Illustration and Exhibits and Photography Divisions of the Medical Graphic Arts Dept., Naval Medical Training Institute, NNMC, Bethesda, Md., is gratefully acknowledged.



from the Chief

By perusing this issue of our Medical Department journal, attention is focused on history, new construction, ribbon-cutting, and modern concepts of health care delivery. This particular combination of topics is not fortuitous or without editorial design.

We have embarked on an unprecedented program of medical construction. For those who work in, or frequent our modern facilities, there can be no more immediate proof of the increased support to which the Navy system is committed.

For young men and women who are contemplating naval careers, the present emphasis on education and innovative changes in our health care organization give every indication of a promising future. For those who value the opportunity to build, and who aspire to provide medical services of superior quality without restraints imposed by self-serving local interests and economic deprivation, there is tangible evidence of expanded professional growth in the Navy Medical Department.

One of our greatest assets is a solid and sturdy foundation upon which to build. We are especially mindful of this precious legacy during the month of October, since formal respects to our predecessors are now officially expressed on October 13th, Navy Day; and October 23rd, Veterans Day. We owe much to the men and women who have contributed to one hundred and ninety-seven years of inspiring naval history by their dedication, sacrifice, and example. We could do no worse than overlook them, no better than emulate them.



NAVY DAY

October 13, 1775-1972

At the onset of the Revolutionary War, the first ship of "Washington's Fleet," USS HANNA, put to sea on 5 September. During the fall and winter of 1775-6, 35 ships were captured by the Navy's first squadron. The richest prize was the brig NANCY, with a cargo of cannon and powder. The Second Continental Congress passed legislation on 13 October 1775, authorizing the acquisition of ships and the establishment of a Navy. This is the date now celebrated as Navy Birthday. Navy ships soon afterward led an expedition to the Bahamas for what was the first joint Navy and Marine Corps amphibious operation. In the War for Independence, the Navy's bold attacks on British shipping hurt their war effort here; Jones, Conyngham (see front cover and caption on page 1) and Wickes brought the conflict to Britain's home waters. Jones, in BON HOMME RICHARD, defeated HMS Serapis in the most celebrated naval battle of the American Revolution.

Following a period of decline for the U.S. fleet, the Navy was again called upon during the Quasi-War with France in 1798, to later ward off the Barbary Pirates in the Mediterranean and to participate in our second

armed conflict with Britain in 1812. The first American triumph of this war was the defeat of HMS Guerrier by Captain Isaac Hall in CONSTITUTION, and other victories followed on the inland waterways under Commodores Perry and Mac Donough.

The War with Mexico began in 1846, and the Navy provided gunfire support to the Army ashore. Less than 20 years later, the experience of the Civil War brought to the forefront dynamic technologic advances in the field of naval warfare. The Federal Navy was small at the start of the conflict, but it gave the Union control of the seas and prevented the South from ever developing any significant naval strength. In the South, ingenuity supplemented meager resources, and the Confederacy turned to ironclads, mines and the submarine HUNLEY.

Another decline in the Navy's prominence followed the Civil War, and then in 1883, the first all-steel cruisers were authorized. New warships followed with vastly improved gunnery systems and advanced armor plating. When the sinking of the MAINE brought war with Spain in 1898, this modern Navy gained a decisive



Participating in a Navy Day parade and review conducted by the 1st Marine Division at Camp Pendleton, Calif., on 27 Oct 1971, are (from left to right): MAJGEN Ross T. Dwyer, Jr., USMC, Commanding General; MAJGEN Herman Poggemeyer, Jr., USMC (now retired); CAPT Ramon J. Wallenborn, DC, USN (then CO, Nav Dental Clinic, MCB, Camp Pendleton); CAPT Jan F. King, DC, USN, CO 1st Dental Co., 1st Marine Division; CAPT George M. Ricketson, MC, USN, CO Naval Hospital, Camp Pendleton at the time; CAPT Earl D. Sneary, CHC, USN, Base Chaplain, MCB; CAPT Malcolm Carpenter, CHC, USN, Division Chaplain, 1st Marine Division; CAPT Anderson T. Mason, MSC, USN, CO Medical Service School, MCB; and CAPT Elizabeth Feeney, NC, USN, Chief Nursing Service, Naval Hospital, Camp Pendleton.

victory at Manila Bay under Admiral Dewey, and another at Santiago, Cuba, under Admiral Sampson. At the war's end, President Theodore Roosevelt paraded his "Great White Fleet" before the world as a sign of America's determination to protect its overseas possessions and display her technical proficiency, good will and prestige.

With the two World Wars came further development of the submarine, the introduction of naval air power into U.S. strategic planning and thus the birth of the aircraft carrier. World War II saw the greatest amphibious landing ever staged occur on the beaches of Normandy, France, and a continual Navy and Marine effort to secure the islands of the South Pacific and check the expansion of Japanese naval power in that theater.

In Korea and Vietnam the Navy has provided gun-fire support of land operations, and in Vietnam an extensive riverine force was established to check the flow of supplies through the inland waterways of South Vietnam to interior enemy strongholds.

To meet the management and logistics problems presented by her diminishing combat role in Vietnam, the Navy has established a new "special unit" of volunteer advisors. Beginning last year these specialists have been undergoing intensive training in the academic and technical skills they will need to carry out their mission.

Their "training camp" is the Navy Inshore Operations Training Center at Mare Island, Calif., up the coast from San Francisco. It is an ideal site because of the geographic similarity of the deltas of the Sacramento and Mekong Rivers.

At Mare Island, the men not only learn survival and combat techniques which will help them through an emergency, but also subjects such as Vietnamese history and culture, which increase their effectiveness as advisors and ambassadors of good will. Since language skills are also important, the men attend intensive courses in Vietnamese given either in El Paso, Tex., or in Washington, D.C.

When their training is complete, the men of this new "team" are fully prepared to assist the Vietnamese Navy in perfecting its skills, not only in its primary mission of keeping clear the waterways of Vietnam, but also in conducting psychological operations and medical, civic action, and other programs aimed at improving the living standard of the Vietnamese people.



Volunteers for the U.S. Navy Advisory Program in Vietnam climb ropes during a physical training session at the Naval Inshore Operational Training Center, Mare Island, Vallejo, Calif.



A Vietnamese language instructor conducts a class for students at the Naval Inshore Operational Training Center, Mare Island. The men are volunteers for the U.S. Navy Advisory Program in Vietnam.

HEALTH CARE DELIVERY

Second Annual Conference

By CAPT Richard L. Bernstine, MC, USN, Head, Clinical Military Specialties Branch, Research Division, Bureau of Medicine and Surgery, Washington, D.C. (Photos by PH2 Buzz Benzur, Courtesy of Navy News Bureau, NAS Pensacola, Fla.)

In excess of 76 persons representing many disciplines in military and civilian life attended the Second Annual Conference on Health Care Delivery conducted by the Bureau of Medicine and Surgery at the Naval Aerospace Medical Center, Pensacola, Fla., on May 30-31, 1972.

The group was welcomed by: RADM Oscar Gray, Jr., MC, USN, Commanding Officer, Naval Aerospace Medical Center; CAPT Marvin D. Courtney, MC, USN, at that time Commanding Officer, Naval Aerospace Medical Institute, and; CAPT Neil V. White, Commanding Officer, Naval Hospital Pensacola, Fla. RADM Ralph E. Faucett, MC, USN, at that time Assistant Chief for Research and Military Medical Specialties (BUMED), responded for the Bureau of Medicine and Surgery. At the same time, RADM Faucett officially welcomed Dr. Lawrence L. Weed as Consultant to the Surgeon General of the Navy in Health Care Delivery. To commemorate the occasion, a plaque was presented to Dr. Weed.*

CAPT Hugh S. Pratt, MC, USN (Director of the PROMIS [*Problem Oriented Medical Information System*] laboratory, Naval Hospital Pensacola) opened the scientific session by describing the PROMIS application at Naval Hospital, Pensacola. CAPT Pratt reviewed the introduction of Dr. Weed's problem-oriented record in the Navy. LCDR Charles Morrison, MC, USNR initiated the record system at Naval Air Station, Brunswick, Me.** In January 1971, CAPT Pratt visited Dr. Weed and recognized the advantages of this approach to medical record keeping.

CAPT Pratt described the classic "Weed" approach to medical record keeping: data base, problem list, follow-up, and plans. He discussed in detail the "Weed" concept of problem-oriented medical records.

The system has been instituted in intensive care areas (nurse's notes) and the Internal Medicine Department (entire chart). Audit is performed by paramedical personnel for System Design and by physicians

*Dr. Weed is Professor of Medicine at the University of Vermont School of Medicine.

**Bernstine, RL: Seminar on medical care delivery. US Nav Med 58(1):4-8, Jul 1971.



Dr. Lawrence L. Weed, recently appointed Consultant to the Navy Surgeon General in Health Care Delivery, comments on the implementation of the problem-oriented medical record.

for content. The Chief of the Service is held responsible for the quality audit.

At Naval Hospital Pensacola, the departments of obstetrics and gynecology, anesthesia, orthopedics, and walk-in clinics are committed to PROMIS.

Increased time is required of the physician to properly generate a history in this manner. It is anticipated that the newly-structured PROMIS laboratory will relieve the physician of this task. The PROMIS laboratory will assimilate: a general medical history (280 questions); a psychiatric screening history; audiogram; anthropometric testing; blood pressure measurement; ear, eye, nose and throat examination; scalar and vector electrocardiograms with computer analysis; specific genital examinations for both sexes; forced expiratory volume and biochemical tests.

When fully operational, it is anticipated that the facility will service 100 patients/eight hours.

Dr. Lawrence Weed initiated the discussion of the PROMIS program. He commented that difficulty may arise in getting material from the data base to the problem list. He cautioned that the data base should be representative and not reflect only the specialist's particular interest.

The presentation of large quantities of information to the physician at one time may overwhelm him. Previously, the physician extracted information from the patient as he desired it. The development of a computer history should be based on definition of why the physician asks a specific question; determine what he plans to do with the information. It is necessary to define problems which endanger human life, whether they exist in the classic medical sense, or involve other

areas such as wearing seat belts while driving a car. Ask proper questions in a complete, structured format. Use the patient as his own best control.

Dr. Weed addressed the manner of audit. He emphasized the importance of ascertaining a core of behavior rather than a determination of fixed criteria in auditing an individual's professional performance. Require the individual to support his actions with logic. Determine his thoroughness, reliability, analytical ability and efficiency. It is always possible to improve professional performance. Be explicit, not rigid, in auditing records. Be flexible to change and update methods when the facts demonstrate this need.

A question-and-answer session followed the presentation by Dr. Weed. COL Augerson questioned aspects of evaluation other than audit. CAPT Pratt responded that the history questions and other aspects of the entire program are constantly reviewed to determine possible new areas for research. The role of nursing as an integral part of PROMIS was emphasized.

CAPT Lloyd Miller, MC, USN (Director, Research Division, BUMED Code 71) raised the important question inherent in research endeavors, i.e., how one demonstrates that a given system represents an improvement over a previous system. Responses by CAPT Pratt and Dr. Weed pointed out the difficulties in this area. The former (source-oriented) record was not really a system. It does not preserve or assess the physician's logic. The problem-oriented record is a tool by which the quality of health care delivery can be properly evaluated.

The remainder of the first morning session of the conference was devoted to a tour of hospital wards to review charts which are problem-oriented and a tour of the new PROMIS laboratory. Both areas were impressive and reflected the main points considered during the morning presentation.

The afternoon session was opened by LT David Schall, MC, USNR who reviewed the research program in health care delivery at the Dispensary, Naval Air Station, Brunswick, Me. The research at this activity was initiated to improve the quality and delivery of health care. A modification of the PROMIS was utilized.

In a review of medical records by LCDR Morrison, who originated the research effort at Brunswick, the following data were collected. The items indicated were reviewed and determined, if present, for all patients and for those patients over 40 years of age. The review covered an average period of 3.04 years per patient and 4.46 visits per patient per year (average). *See Table 1 on next page.*

Dr. Schall commented on the importance of a functional appointment system in restructuring the dispensary

TABLE 1.—Available Information in Source-Oriented Records.

Information Available in Conventional Outpatient Records (Percent)					
	Complete History	General Physical Exam.	Blood Pressure	EKG	Tonometry
All patients	18.2	40.2	47.2	16.6	16.0
Patients over 40 years of age (318 charts)			56.5	36.3	36.3

to provide more uniform patient flow and better utilization of the physician's time. Two forms of entry to medical care were established: programmed patient care, and, outpatient care. Programmed patient care represents the collection of data base and a medical examination. The outpatient visits represent medical responses to specific problems. Dr. Schall concluded his presentation by showing the recently-produced movie, "Improving Health Care," which documents the research effort at the Dispensary, Naval Air Station, Brunswick, Me.

LT Edward C. Schmidt, MC, USNR, also from the Dispensary, Naval Air Station, Brunswick, presented additional information on the project. At the present time more than 6,000 medical records are stored in the computer. Paper records are primarily used at the time of patient transfer to a new facility, or for consultation and X-ray reports.

A standardized procedure for patient management has evolved which: provides a uniform format, improves health care delivery, and allows the medical-record secretary to handle larger volumes of information. The patient is greeted by the medical secretary when he reports to the clinic. Correct patient identification is ensured and demographic data is recorded. The patient may then proceed to a paramedic who will perform selective physical examination procedures, following which the patient may be seen by a physician who is able to review the recorded inputs from the secretary and paramedic. The physician can also review additional patient data stored in the computer. At the end of the visit, the physician dictates his report into the dictaphone bank (which will be placed in computer storage). Orders for laboratory procedures will be transmitted to the laboratory's cathode ray tube (CRT). The laboratory will obtain and enter the results into the patient's records (via dictaphone bank and computer). This procedure has significantly decreased loss of laboratory-generated information. In the very near future, a similar method will be applied in the pharmacy.

Dr. Schmidt briefly reviewed the changes which have been instituted as a result of a survey conducted by the Navy Norfolk Manpower Group. All appointments are made by one person located at one specific area. Relocation of subspecialty clinics has been accomplished. The paramedic screener has been installed in his own office. A limited number of telephones is made available to the physicians.

LT Schmidt presented a review of 587 charts indicating the percent of abnormalities reported for each screening laboratory and physiologic test.

TABLE 2.—Frequency of Abnormal Screening Tests in PROMIS.

<i>Procedure</i>	<i>Percent Abnormal</i>
Weight	54.2
Blood Pressure	5.9
Tonometry	4.0
Blood Glucose (1 hour)	14.2
EKG	9.3
Vital Capacity	27.1
1 Sec Forced Expir. Vol.	38.5
Visual Acuity, 16 inches	27.9
Visual Acuity, 20 inches	24.0
Audiogram	13.8
BUN	1.6
Blood Cholesterol	12.6
Serology	0
Sedimentation Rate	12.2
Hematocrit	1.8
Urine Culture	21.6
Urine Protein	3.2
Glucose	5.9
Occult Blood	5.5
Chest X-ray	1.8
White Blood Cell Count	1.6



A technician demonstrates the automated respirometer at the PROMIS laboratory. Observing the demonstration are, from left to right: CDR J.E. Wells, Director, Health Care Administration Division, BUMED; CAPT L.F. Miller, Director, Research Division, BUMED (back to camera); RADM Ralph E. Faucett, former Assistant Chief of the Bureau for Research and Military Medical Specialties; and Dr. Diane M. Ramsey-Klee, Director, R-K Research and Systems Design, Malibu, Calif.

Dr. Schmidt concluded the presentation by summarizing his impressions based on research conducted at the Dispensary, Naval Air Station, Brunswick.

1. Patient acceptance is excellent. The time spent in the waiting room before seeing a physician is five to 15 minutes. Patients are asked to report ten minutes prior to appointment time, to prevent late arrivals and idle physician time. (Not completely successful.)

2. Consultants from Naval Hospital Boston, Chelsea, attend some specialty clinics which have been established at the Dispensary.

3. The system identifies psychosomatic problems more efficiently than traditional methods and such patients can be managed by proper appointments rather than by fragmented responses to specific problems as they arise.

4. Increased efficiency of health care delivery results.

5. Patients answer questions from the computer more accurately, or honestly. In addition, computer questioning encourages patients to reflect in orderly fashion and thus define problems with greater specificity before seeing the physician.

6. The paramedic is trained to separate the abnormal from the normal, not to make diagnoses.

7. A survey of the female population revealed that 74% would be equally receptive to having a Pap

smear taken by a specially-trained corpsman or by a physician.

8. Physicians like the system, particularly the record portion.

9. The physician is able to review all his notes at the end of each day.

10. Technical problems with the equipment have been minimal. The major problem presented is the necessity for three dictaphone banks to ensure continuity of service; only 47 minutes unscheduled down time with the computer have occurred. Occasionally telephone lines (above ground) are affected by considerable interference, probably due to weather conditions, which hamper transmission from the dispensary to the computer (located in Boston).

11. The estimated cost per patient visit is \$3.00.

LT W.J. Sullivan, USN of the Fleet Work Study Group, Atlantic presented the background of a specific effort to assist the Navy Medical Corps in increasing efficiency of health care delivery. Work study teams have been employed in the following dispensaries: Naval Air Station, Brunswick, Me.; Naval Operating Base, Norfolk, Va.; Naval Air Station, Norfolk, Va.; Little Creek Dispensary, Va.; and the aircraft carrier CVAN-71. Studies have also been completed at the Naval Hospitals in Bethesda, Md., and Beaufort, S.C.

The specific study at Brunswick was concerned with structuring the environment for the incorporation of the problem-oriented record within the confines of the outpatient department. An additional objective was to maximize the utilization of the physician's time by eliminating nonessential administrative and nonmedical functions.

To provide the proper setting for the physician, LT Sullivan cited such examples as the paramedics, the appointment system, patient flow and the layout. All were considered individually. For example, effective utilization of paramedics may increase the physician's productivity by 20 percent. A recent DOD study conducted at three military installations, one Navy, one Air Force, and one Army, indicated that a savings of between \$69,000 and \$250,000 resulted from the utilization of paramedics.

Inefficient layouts constitute problem areas by increasing physician-waiting time, interrupting the flow pattern of the patients, and causing suboptimal utilization of the available paramedics.

A planned maintenance system is vital to all health care delivery systems in order to eliminate unexpected and costly down time for much utilized and necessary equipment. In this age of finely-designed technical equipment, the need for the planned maintenance system is recognized.

Just as the machinery requires an optimal environment to produce outstanding results, so must the physician's environment be conditioned. A recent study has revealed how a physician spends his time during the work day: total time in the office was six hours and forty-five minutes, one hour and fifty-three minutes of which were spent in diagnosis and fifty-nine minutes in treatment; the remaining time was spent in health information and counseling, preventive medicine and

administrative activities. Within a structured environment, it is theoretically possible to increase effective utilization of physicians' time by 100 percent.

All of the above features and suggestions can result in dollar savings as well. As we proceed into a new scientific age, the work-study practitioner and physician can work in concert to expand and enhance the health care delivery system.

Dr. Weed commented on the presentations at the conclusion of the afternoon session. He emphasized the importance of removing memory from the system and stressed that audit was essential. He was critical of one aspect of the Brunswick study in that audit was managed primarily by the physician who performed the work. The importance of establishing audit on the basis of thoroughness, reliability, analytical processes and efficiency was reiterated. These same factors could be used to establish flow sheets on corpsmen to determine their task performance, Dr. Weed noted.

Comparing the source-oriented record to the problem-oriented record, Dr. Weed observed that the latter offers explicit information which can be audited for quantity and quality. Information contained in the source-oriented record cannot be thoroughly evaluated. Computers assist greatly in the procuring of information. The formulation of a problem list would be very different in the source-oriented record since the information, if present at all, tends to be widely dispersed throughout the entire medical record. Only the problem-oriented record makes plans immediately available. Audit should be conducted primarily for medical quality and then from the management point of view. If the quality of the medical record is substandard, determine whether the procurer of the facts is at fault or whether a management problem may exist (i.e. inaccessibility of medical tests, or laboratory delays). It is important to prepare a correct — if need be, incomplete — record rather than one of poor quality. Establish a behavioral core for all individuals concerned with health care delivery.

CAPT Ouida Upchurch, NC, USN, Special Assistant for Education and Training in the Research Division, BUMED, moderated the third session and introduced the general subject of "paramedical programs."

CAPT James Wilson, MC, USN, Special Assistant to the Commanding Officer, Naval Medical Training Institute, NNMC, Bethesda, described the program for training "physician assistants."* He reviewed the implementation of the program in the three military services.



Undergoing an automated audiogram during a visit to the PROMIS laboratory is RADM Alene B. Duerk, Director, Nursing Division, BUMED.

*See "Physicians' Assistant Training for Hospital Corpsmen." US Nav Med 57:44-45, Jun 1971.

"Questions and Answers." US Nav Med 59:50-51, Apr 1972.

The purpose of the present Navy program, he explained, is to create generalists who can act as assistants to the physicians. These paramedics will work in the outpatient department only. By FY 78, 355 physician assistants will be employed in the Navy. Towards the end of this period, similar billets will be established in ships and in the Marine Corps.

A short interim clinical program was established to initiate the program for Navy paramedics. A small amount of didactic study was included. This program has served its purpose and will not be continued in the future.

At the present time, a cooperative effort has been established with George Washington University (90 credit hours) and provides for one year of further training at a naval hospital. Additional trainees will be enrolled at the Air Force facility at Wichita Falls and they will also earn credit for one year of study at the college level. Present plans provide for 15 students to train in the George Washington University program, and 30 students at Wichita Falls.

The following controversial questions were posed by CAPT Wilson.

1. What does a physician's assistant do? At the present time he will do whatever the physician permits him to do.

2. What degrees of independence will be granted a physician's assistant aboard ship or with the Marines?

3. Where do the independent-duty hospital corpsmen fit into this program?

4. Why doesn't the Navy commission physician's assistants when they receive B.S. degrees? In the Navy, they are eligible only for warrant officer rank. Three members of the first enrolled class were commissioned into the Medical Service Corps before completing the training.

CAPT Wilson emphasized that no competition is created in health care services delivered by the physician's assistant and by the registered nurse.

The "screeners" program was briefly outlined by CAPT Wilson. Screeners receive specific training for three weeks at Naval Hospital Bethesda, Md., followed by six weeks' additional preceptorship upon return to the hospitals where previously assigned. The major function of screeners is triage and the training period at Naval Hospital Bethesda is devoted primarily to this modality. The screener does not treat patients. All patients see a physician. The screener's objective is to expedite the patient's access to a physician.

The results of this program are variable, depending on the degree to which established guidelines are followed. In one instance, at Naval Hospital Long Beach, it has been determined that screeners reduce

the physician load of patient interviews by 30 percent.

RADM Alene Duerk, NC, USN, Director, Nursing Division (BUMED), presented details of the "Nurse Assistant" program. This program involves the training of nurses both as clinical specialists and as nurse practitioners. The clinical specialist must earn a master's degree. Nurse practitioners are not required to hold academic degrees and are trained at Naval Hospital Portsmouth, Va., or Naval Hospital San Diego, Calif. Nurse practitioners will work in obstetrics and gynecology under the supervision of a physician. They will collect historical data from the patient, provide routine care for prenatal patients, dispense routine prescriptions (as established by local standing orders), conduct classes in maternity care and family planning, and perform routine gynecologic examinations including Pap smear collection and cervical biopsy. In addition to the OB/GYN nurse practitioners, three students are undergoing training at Massachusetts General Hospital as pediatric nurse practitioners. Nurse practitioners are regarded as associates of the physician in health care.*

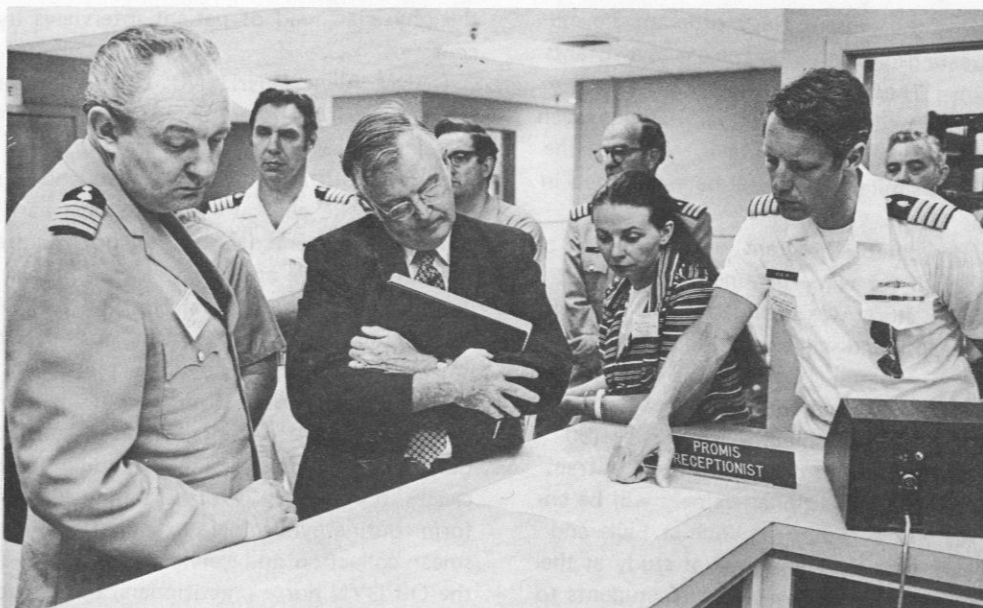
LT Allen Kaplan, MC, USNR (Naval Hospital Pensacola, Fla.) presented the findings of the MEDEX System in the Dartmouth-affiliated hospitals. The initial participants in the program were generally ex-corpsmen with at least a high school education. The curriculum centered on procurement of a medical history, performance of physical examination and certain selective tasks. Dr. Kaplan restated Dr. Weed's principles of audit for these individuals. He stated that their activities must be defined. Their preceptor must establish protocols for various clinical situations, then decide how they function, and conduct a proper audit. The assigned tasks involve some acute illness problems, as well as chronic disease follow-up. In each instance, an algorithm has been established. The algorithm is primarily intended to protect the patient from the partially-trained individual.

Two groups have entered this program. The second group contained three women and four individuals without Hospital Corps background.

The final session of the conference was devoted to general objectives of the Navy's program of health care delivery. CAPT Richard L. Bernstine stated that optimal physician participation should be of primary concern. The following guidelines were presented for consideration:

*See following articles. Lukey F: The OB-GYN nurse practitioner. US Nav Med 59:8-9, May 1972.

Noble FA; Quinney DM and Schanberger JE: The Navy PNP. Pediatric nurse practitioner. US Nav Med 59:4-7, May 1972.



Examining an automated printout of a problem-oriented medical record during a tour of the Pensacola Naval Hospital's PROMIS laboratory are, from left to right: CAPT E.L. Lobpreis, BUMED; Dr. Barkley Beidleman, Pensacola, Fla.; Donna Gane, R.N., Burlington, Vt.; and CAPT J.R. Senior, Philadelphia V.A. Hospital and Consultant for the National Board of Medical Examiners and the American College of Physicians.

1. Do not utilize the physician in performance of tasks which do not require his advanced training, knowledge and ability, or which do not require decision making.

2. Extend the use of his knowledge. Situations which are well defined and which are uniformly managed can be programmed.

3. Conserve the physician's time. Provide him with the ancillary personnel and equipment that he requires to perform in an effective, meaningful way.

CAPT Bernstine briefly reviewed the Navy's ongoing effort in health care delivery emphasizing its primary role to support the operating forces in all situations. He favored the inclusion of members of the line in planning groups for improving health care delivery. The line should be ready to determine what type care they really want and how much they are willing to pay for it from the total resource package.

Dr. Ramsey-Klee discussed the Navy's program in the light of her experiences as Consultant to the Department of Health, Education and Welfare in Health Care Delivery. She reviewed the cooperative study on electrocardiogram analysis centered at St. Luke's Hospital, Denver, Colo.

Dr. Ramsey-Klee noted some of the problems encountered in implementing the total hospital information system at El Camino Real Hospital. There was a decrease in physician interest when their indoctrination into the system was followed by a delay prior to implementation of the system. Departments which had

standardized routines (i.e., surgery) accepted the system more readily. The use of a "data processing technician" interfaced between the system and the physician user will speed indoctrination and acceptance.

RADM Faucett noted the cost savings to the Navy as improved health care delivery attracts patients from CHAMPUS. He praised the Federal medical system for being complete in function, cost effective, utilizing the best medical educational system and providing the easiest customer access.

CAPT Pratt concluded the discussion. He enumerated the problems in health care delivery, the pitfalls encountered as research progresses and ways to evaluate these efforts.

The meeting was adjourned following closing remarks made by CAPT Miller and RADM Oscar Gray on behalf of the host facility, the Naval Aerospace Medical Center, Pensacola, Fla.

In closing, CAPT Miller emphasized the importance of an improved health care delivery system which is applicable to the many unique operational environments of active duty members at sea, ashore, and in the field. He indicated that the Navy's research and development program was addressing the operational needs and that substantial benefits are anticipated. He observed that the research studies in health care delivery, and education and training are closely related to the care support projects in amphibious medicine which focus on health care of the combat casualty, whether on the beach or at sea. 🇺🇸

A NOBLE PREDECESSOR—

VADM Joel T. Boone



Many of you recall a great movie of the past called "All's Quiet On The Western Front." Not all heroes of the Western Front carried bayonets, rifles or grenades. For example, let me read to you a citation:

"For extraordinary heroism, conspicuous gallantry, and intrepidity while serving with the Sixth Regiment, United States Marines, in actual conflict with the enemy at and in the vicinity of Vierzy, France, 19 July 1918. With absolute disregard for personal safety, ever conscious and mindful of the suffering fallen, Surgeon Boone, leaving the shelter of a ravine, went forward onto the open field where there was no protection and, despite the extreme enemy fire of all calibers, through a heavy mist of gas, applied dressings and first aid to wounded Marines. This occurred southeast of Vierzy, near the cemetery, and on the road south from that town. When the dressings and supplies had been exhausted, he went through a heavy barrage of large-caliber shell, both high explosive and gas, to replenish these supplies, returning quickly with a side-car load, and administered them in saving the lives of the wounded. A second trip, under the same conditions and for the same purpose, was made by Surgeon Boone later that day."

The above address was delivered by VADM George M. Davis, MC, USN, Surgeon General, at the Dedication Ceremony of the Admiral Joel T. Boone Clinic, Naval Amphibious Base, Little Creek, Norfolk, Va., on 15 Mar 1972.

This was only one of the numerous citations received by that gallant Navy medical officer whom we honor today.

Joel T. Boone was born a Quaker, ever mindful of his duty, ever mindful of his fellowman, ever mindful of his God. Is it any wonder such a man should have been chosen to be presidential physician to Warren Harding, Calvin Coolidge, and Herbert Hoover? The great William F. Halsey selected him to be one of three officers who liberated our POWs in Japan prior to occupation of that country after World War II. He represented the U.S. Navy Medical Department at the surrender ceremonies aboard the USS MISSOURI in Tokyo Bay in 1945.

In addition to an absolutely unparalleled career in the Navy, he has served as Medical Advisor to the Federal Coal Mines Administrator and the Hoover Commission, and as the Chief Medical Director of the VA.

The most decorated of our medical officers, Admiral Boone has received, among many other decorations, the Congressional Medal of Honor, the Distinguished Service Cross, the Silver Star with five Oak Leaf Clusters, and the Purple Heart with two Oak Leaf Clusters (one conferred personally by General John J. Pershing).

It seems very fitting that today we honor this great patriot. Even as he has declined physically, he continues to live a life of consideration for others.

Among his many papers and speeches are some literary gems that I would call to your attention.



RADM Joel T. Boone, MC, USN in 1948.

In 1926: "So conduct yourselves . . . that you can look your fellowman in the eye without flinching. If your life is ruled by honorable principles you can do this unconsciously, and the consolation and the joys which are assured to those who live honestly, truthfully, honorably, shall be yours."

In 1932: "Service -- self-sacrificing unselfish service -- to country must be man's richest privilege."

In 1960: "America is a beacon to light the way of freedom along which free men and women walk with firm foot and unafraid."

In 1968: "We cannot talk of good citizenship unless we practice it in our own lives. Nor can we speak of equality of men and nations unless we hold high the banner of equality in our land."

"It is not dissent or protest that could destroy our freedom, and, perhaps, even our nation. Rather it is indifference. Indifference!"

What better way to dedicate a structure to the medical needs of our great Navy than to name this building after one of America's--the Navy's--great patriots! May those people who occupy this building to administer health care needs to our Navy eligibles, have the dedication, the empathy, and the devotion to service that its name implies.



VADM Joel T. Boone, MC, USN (Ret.) at BUMED in 1955. 🍷

THE CONSTRUCTION COMETH

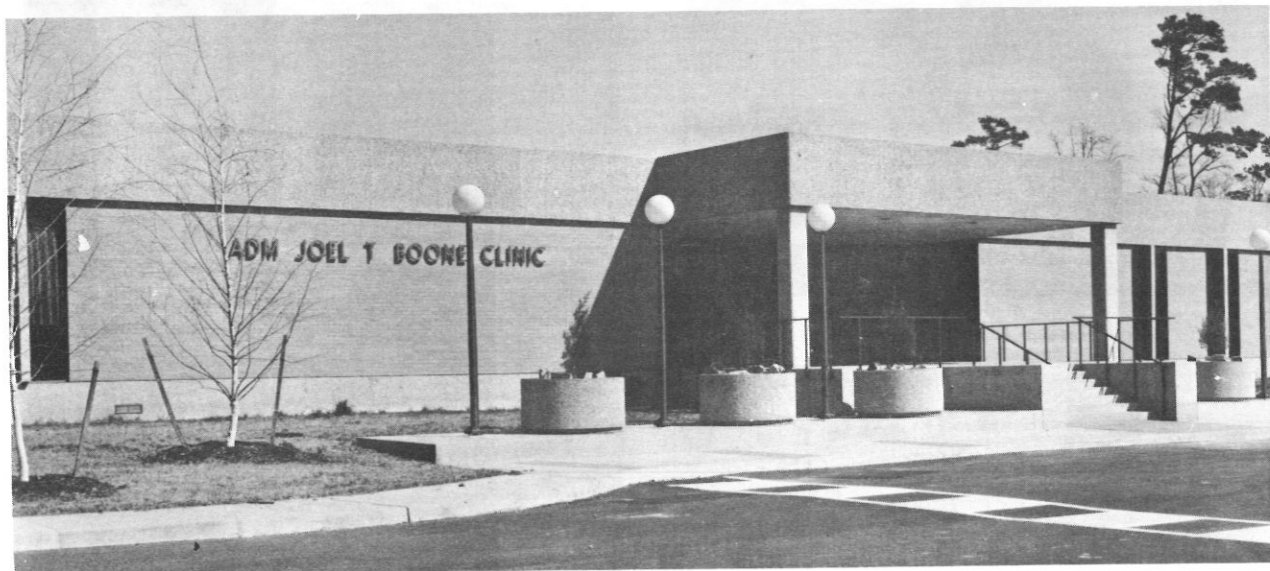
In its July 1971 issue, *U.S. NAVY MEDICINE* published a splendid article by CDR Lloyd B. Nichols, MSC, USN (Code 412, BUMED), outlining an unprecedented naval program of medical construction. Reader response was electric, and NAV MED resolved to keep abreast of further developments in new construction by periodic reviews of input received from the field. This article constitutes such a review.

For their contributions and assistance, we are indebted to the following: PAO, Naval Regional Medical Center, Portsmouth, Va.; "The Hospital Clipper," Naval Hospital Memphis, Millington, Tenn.; CAPT R.W. Elliott, Jr., DC, USN, our dynamic Dental Corps Editor, BUMED Code 611; HMCS Gene E. Stuckey, USN and photographers of USS MOUNT WHITNEY (LCC-20); and BUMED Code 49.

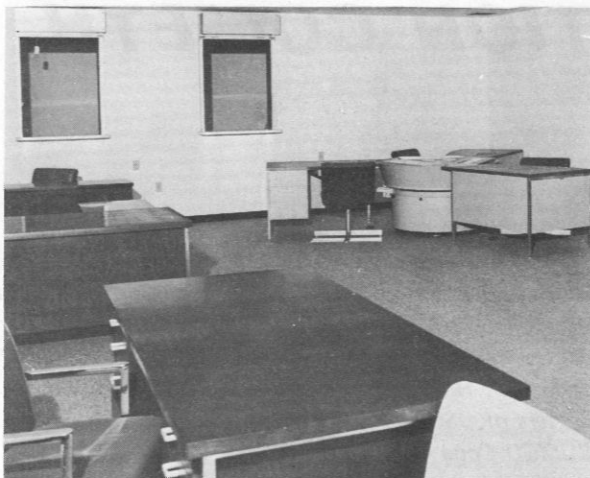
ADM JOEL T. BOONE CLINIC

An ultra-modern medical complex which promises a new, improved dimension in Navy health care service for many eligible persons in the Tidewater area of Virginia has made its formal debut.

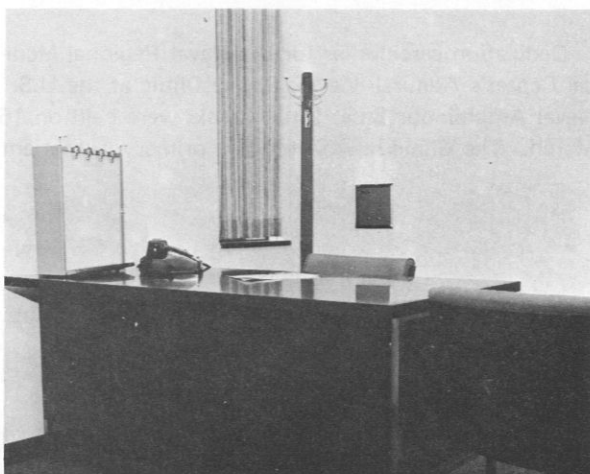
Dedication ceremonies for the Naval Regional Medical Center's Admiral Joel T. Boone Clinic at the U.S. Naval Amphibious Base, Little Creek, were held on 15 March. The Clinic now serves as a primary outpatient



Exterior of ADM Joel T. Boone Clinic



Administrative space including the Appointment Desk



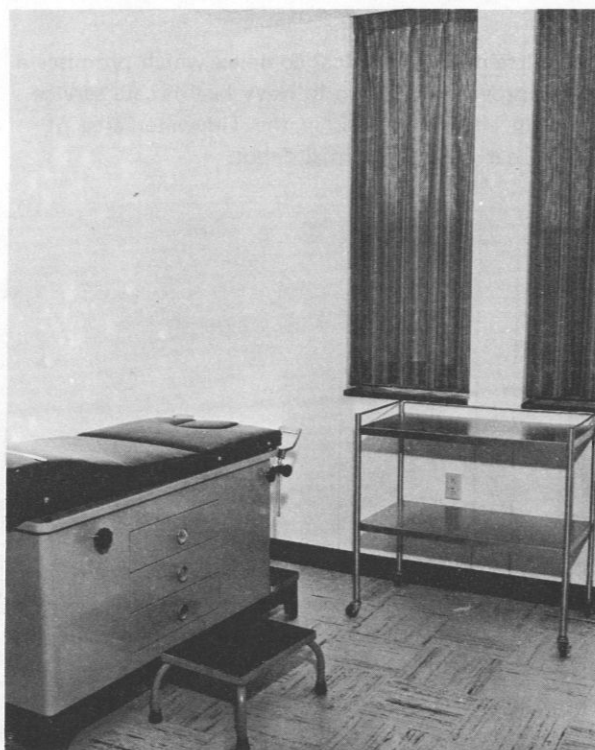
Typical Doctor's Office

facility for dependents and retirees in designated sections of Norfolk and Virginia Beach and provides specialty care for active duty personnel.

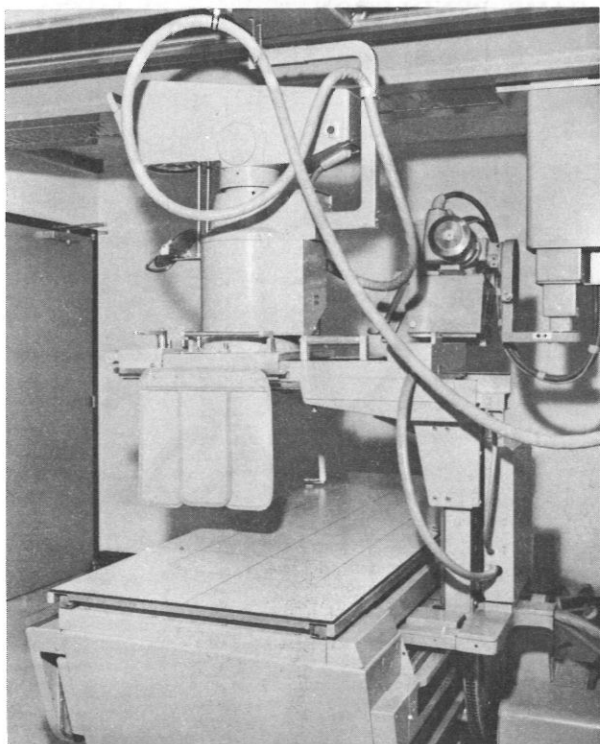
VADM G. M. Davis, Surgeon General of the Navy, principal speaker at the dedication, paid tribute to Admiral Boone and recounted many highlights from his career. Other participants included Mrs. Boone who unveiled a portrait of her husband (currently a patient at the Naval Hospital, Bethesda, Md.), and RADM Joseph L. Yon, Director/Commanding Officer of the Naval Regional Medical Center (NRMCC) at the time.

VADM Joel T. Boone, MC, USN, Retired, for whom the facility is named, served illustriously in the Navy Medical Corps and holds the Congressional Medal of Honor for extraordinary heroism during World War I while serving with the Marines in France. His distinguished career includes several years as White House Physician (1929-1933) during the term of President Herbert Hoover.

After serving in increasingly important medical assignments afloat and ashore, he joined the staff of Admiral Halsey, Commander of the Third Fleet, in 1945. Admiral Halsey named him as one of three



Typical Examining Room



X-ray Unit



Pharmacy with two bottles on conveyor belt

officers to liberate allied prisoners of war in Japan prior to our military occupation of that country. He was the Navy Medical Corps representative at the Japanese surrender aboard the USS MISSOURI on 2 Sept 1945. VADM Boone later became the Chief of the Joint Plans Division, Office of Medical Services in the Dept. of Defense. At the time of his retirement in Dec 1950 he was General Inspector, Medical Dept. Activities.

The clinic bearing Admiral Boone's name will play a key role in the Navy's regional approach to health care delivery for the Tidewater area which began in Jul 1971 with establishment of the Naval Regional Medical Center (NRMC). In keeping with the rapidly emerging health care delivery philosophy of taking the service to the patient, the NRMC schedules visiting specialty teams from the Naval Hospital, Portsmouth, thereby providing services not previously available at Little Creek. The schedule is determined by appointment requests and other considerations.

Appropriately-equipped space has been set aside to accommodate these specialty teams which include

medical and paramedical members, as well as back-up personnel, such as technicians. When no specialty team is scheduled, the spaces are used for in-house purposes.

Services made available immediately when the Boone Clinic opened included: pediatrics, obstetrics/gynecology, general medical, X-ray, medical laboratory, optometry, immunizations, pharmacy, ambulance and emergency rooms.

The new Navy medical facility contains 36 doctors' offices, 56 examining rooms, special medical rooms, and support rooms such as administrative offices. Approximately \$350,000 has been expended for up-to-date equipment and furnishings. Special equipment items include an X-ray unit with fluoroscopy, an audio booth, and a conveyor-belt system in the pharmacy.

Assigned personnel include 22 medical officers, two administrative officers, one pharmacy officer, two Navy nurses, 60 enlisted members, one civil service optometrist, two civil service nurses, one secretary, three appointment clerks, one recorder/transcriber, and one civil service driver.

NAVAL DENTAL CLINIC, CAMP PENDLETON

Friday, 14 July 1972, marked the dedication of the Naval Dental Clinic, Marine Corps Base, Camp Pendleton, California, and the change of command from RADM W.H. Hagerman, Jr., DC, USN, to CAPT W.L. Darnall, Jr., DC, USN.

The new clinic, for which ground was broken on 10 June 1971, contains 30 dental operatories, including two modern oral surgery suites and a large prosthetic laboratory. The building provides total floor space of 15,580 square feet and represents an investment of approximately \$1,075,000.

The mission of the Naval Dental Clinic is to provide a complete dental service to Navy and Marine shore activity units of the operating forces, and other authorized personnel. Staff officers and enlisted personnel who work in this new facility will be able to provide treatment representing all the disciplines of dentistry.

RADM Hagerman is now the Commanding Officer of the Naval Graduate Dental School, NNMC, Bethesda, Md. CAPT Darnall previously served as The Dental Officer, U.S. Marine Corps.



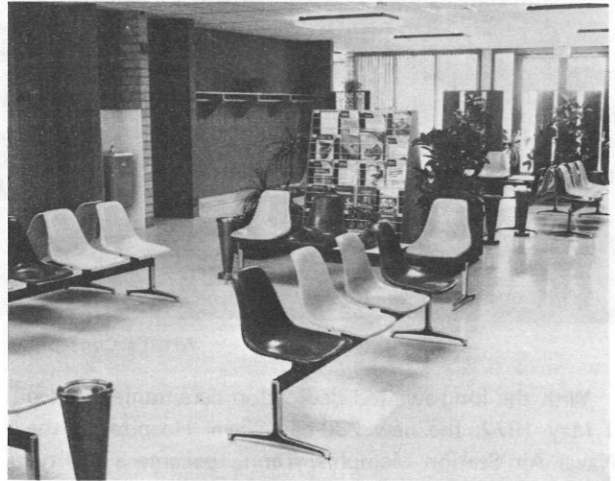
Admiral M.G. Turner, DC, USN (center) assists COL E.J. Radics, USMC (right), Acting Base Commander in ribbon cutting. CAPT W.L. Darnall, DC, USN (left) is the new Commanding Officer of the new dental clinic.



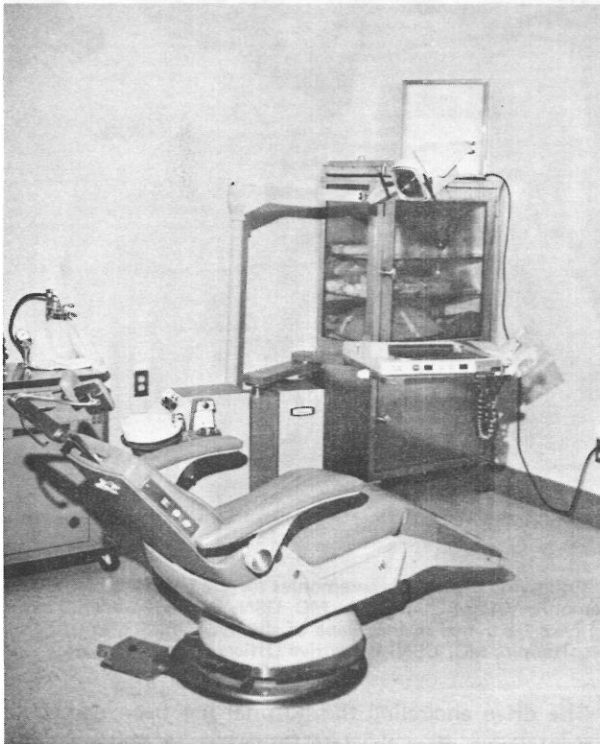
Front entrance to Dental Clinic, MCB, Camp Pendleton, Calif.



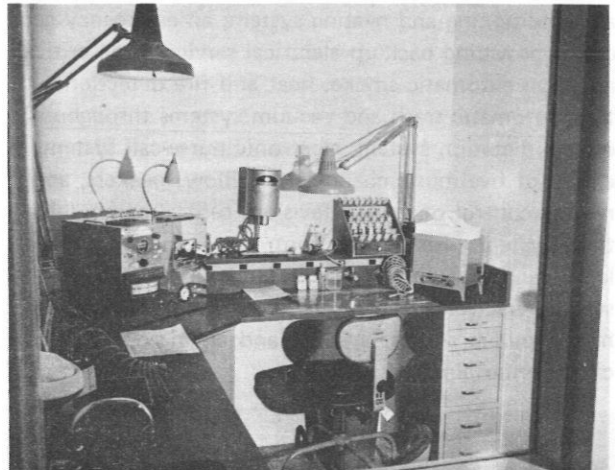
Reception Desk



Waiting Room Space

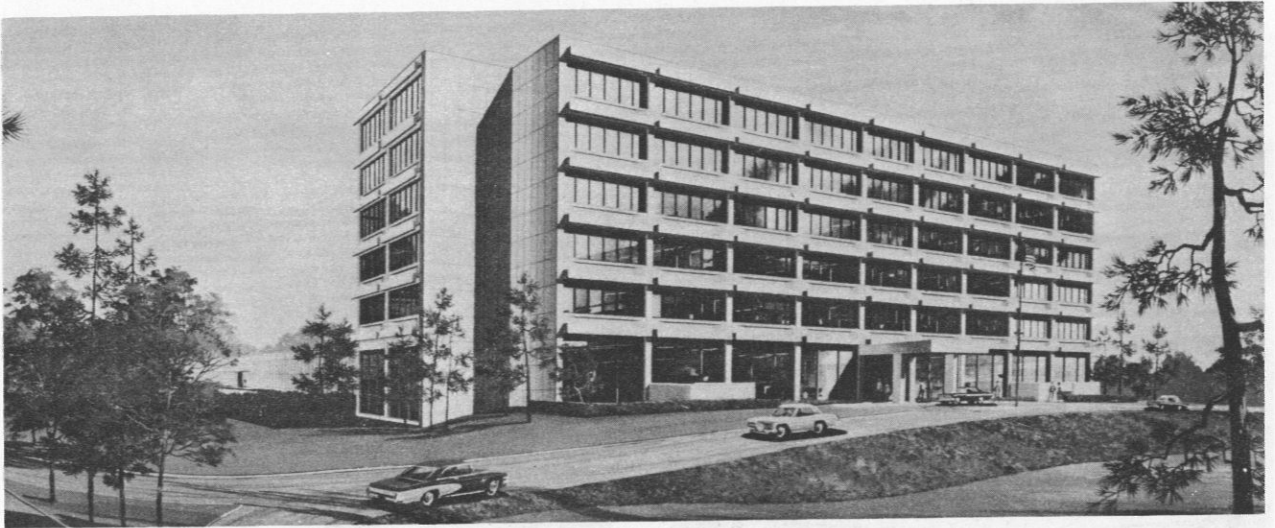


One of two Oral Surgery Suites



Located within Main Prosthetic Laboratory is a separate Ceramco Processing Room.

NAVAL HOSPITAL MEMPHIS



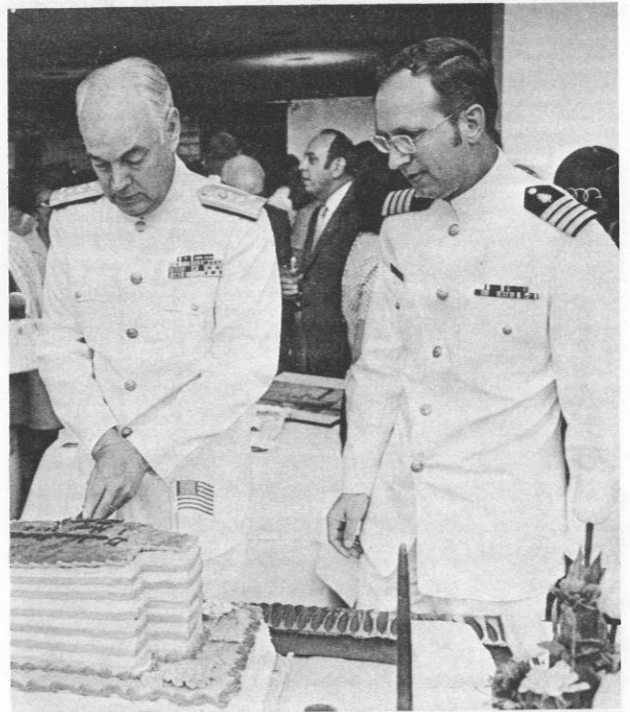
Artist's Concept of Naval Hospital Memphis

With the long-awaited dedication ceremonies held on 1 May 1972, the new 230-bed Naval Hospital at the Naval Air Station Memphis, Tenn., became a reality. The seven-story structure contains 20 intensive-care beds and an outpatient department capable of handling up to 1,000 visits per day.

Some of the modern features include: an automatic air conditioning and heating system; an emergency generator providing back-up electrical service to all critical areas; an automatic smoke, heat and fire detection system; automatic trash and vacuum systems throughout; central dictation system; electronic nurse-call system, a choice of five music channels on pillow speakers, and remote control of color television; central communications system with remote controlled security surveillance cameras, educational closed-circuit color television system, electronic paging system, piped-in background music, public address system, and an in-house closed circuit entertainment system.



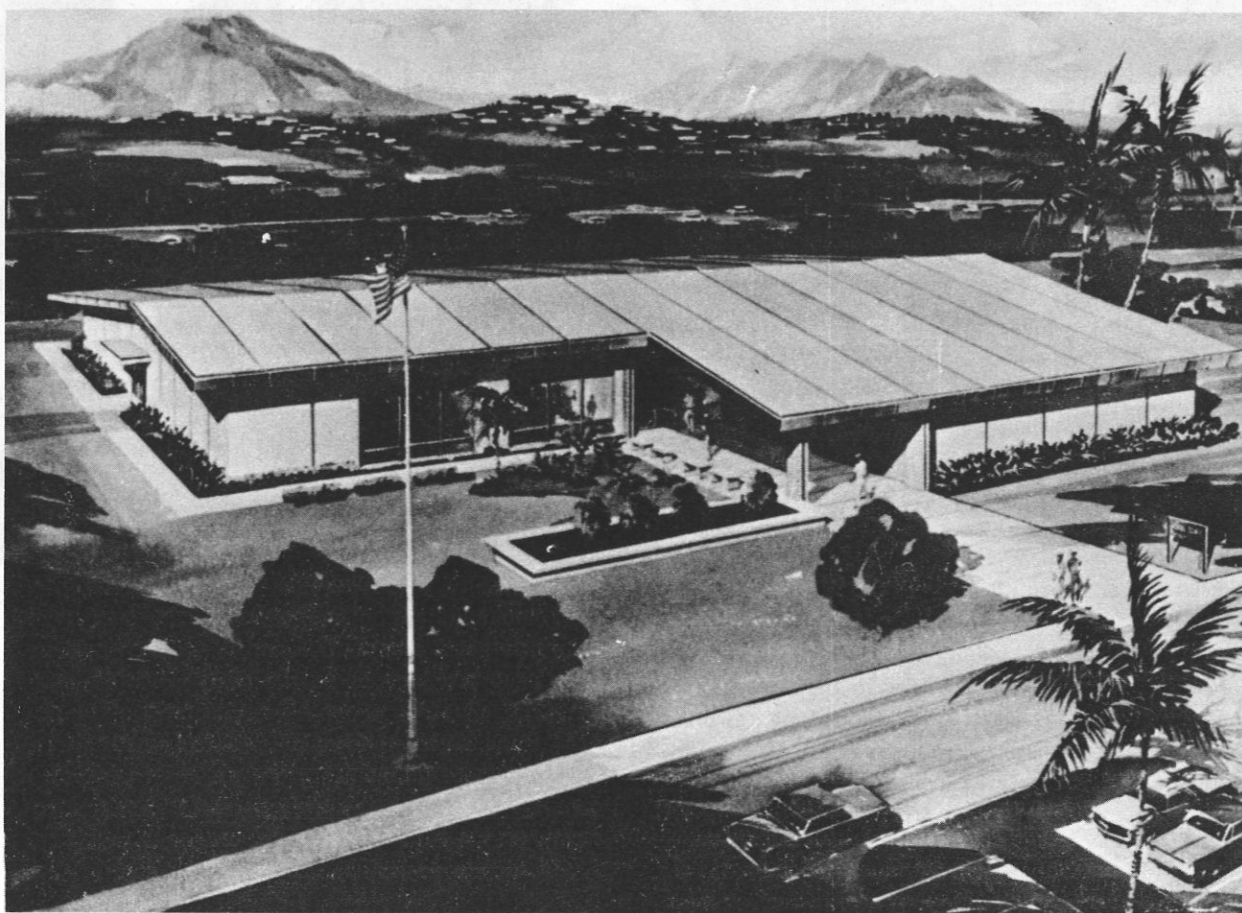
Congressman Ed Jones (D-Tenn.), was guest speaker at the dedication ceremonies.



Following dedication ceremonies for the new Naval Hospital Memphis, VADM G.M. Davis, MC, USN, Surgeon General, cut the cake fashioned in the shape of the new building as CAPT E.R. Hamlin, MC, USN, Executive Officer, stood by.

The drive encircling the hospital has been named Everett Drive after the late Congressman Robert A. Everett (D-Tenn.), who was instrumental in obtaining necessary appropriations for the facility that will serve 850,000 active duty Navy men and Marines, and 1,600,000 dependents and retirees.

NAVAL DENTAL CLINIC, PEARL HARBOR



Naval Dental Clinic, Pearl Harbor, Hawaii

The Naval Dental Clinic Pearl Harbor, Hawaii was officially opened 6 July 1972 when ADM Bernard A. Clarey, USN, Commander in Chief U.S. Pacific Fleet, cut the ceremonial ribbon. He was assisted by RADM M.G. Turner, DC, USN, Director of Dental Activities, 11TH NAVAL DISTRICT and CAPT R.H. Friez who commands the Dental Clinic. Both ADM Clarey and RADM Turner addressed the guests.

The new facility, which has 40 dental operatories and all the necessary ancillary spaces, will accommodate an increase in staff members and expanded dental health care.

This facility is one of three new dental clinics which will be dedicated in 1972 and commanded by dental officers. The others are Naval Dental Clinic, MCB, Camp Pendleton; and Naval Dental Clinic, Long Beach, Calif. Each represents an expenditure of more than \$1,000,000 and brings to fruition the efforts of many dental officers who are serving or have served in the clinic, and in the Bureau of Medicine and Surgery.



CAPT R.H. Friez, DC, USN commands the new Naval Dental Clinic at Pearl Harbor, Hawaii.



Pearl Harbor Dental Clinic opens officially as ADM Bernard A. Clarey, USN (center) cuts ribbon. RADM M.G. Turner, DC, USN (right) and CAPT R.H. Friez (left) assist in the operation.

Five additional dental facilities in the construction phase are located in: Naval Amphibious Base, Coronado, Calif. (14 dental treatment rooms); Naval Air Station, Glynco, Ga. (12 dental treatment rooms); Naval weapons

Station, Yorktown, Va. (five dental treatment rooms); Marine Corps Recruit Depot, Parris Island, S.C. (53 dental treatment rooms); and Marine Corps Recruit Depot, San Diego, Calif. (44 dental treatment rooms).

USS MOUNT WHITNEY MEDICAL DEPT.



USS MOUNT WHITNEY (LCC-20)

USS MOUNT WHITNEY (LCC-20) is the second ship in a new class of amphibious command ships. Commissioned on 16 Jan 1971, the MOUNT WHITNEY is designed to serve as command headquarters for the amphibious task force commander during amphibious operations.

MOUNT WHITNEY has accommodations for a total embarked crew of about 1,450. LCC-20 displaces 17,000 tons, has an overall length of 620 feet, a maximum beam of 108 feet, and is capable of speed in excess of 20 knots. MOUNT WHITNEY and her sister ship, USS BLUE RIDGE (LCC-19), are the first ships

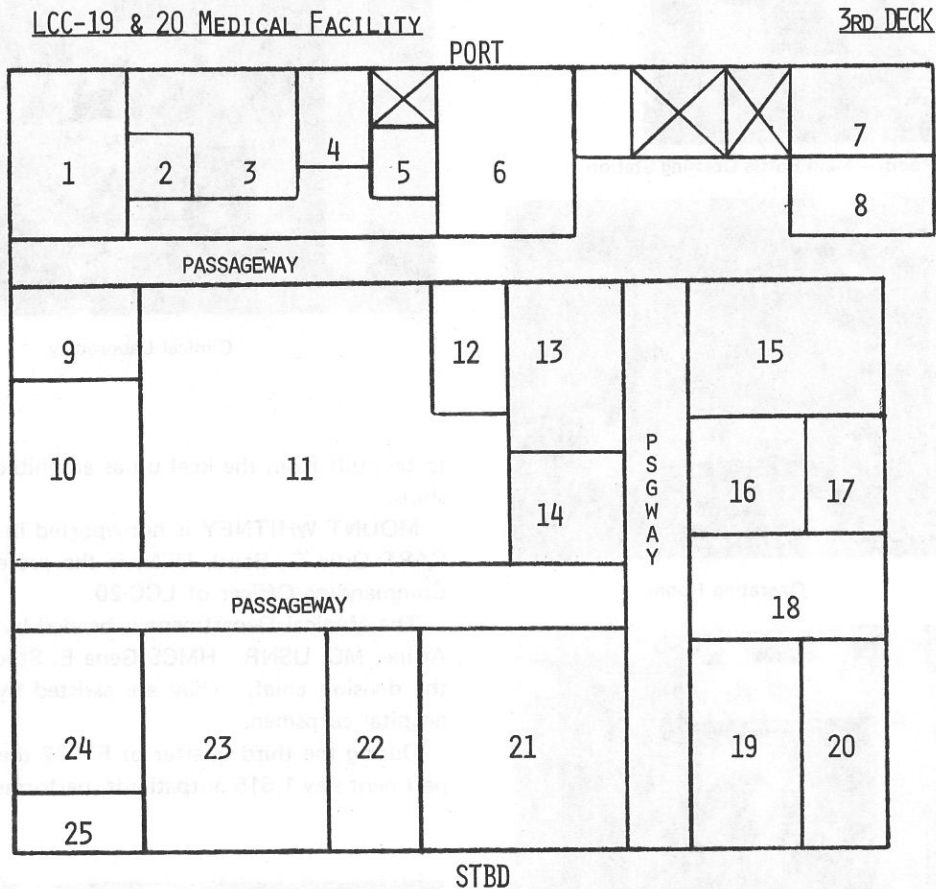
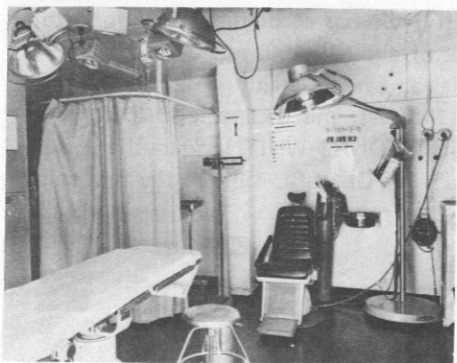


Figure 1.—USS MOUNT WHITNEY Medical Department spaces. (See Figure 2 for key to numbered areas.)

LCC 19 & 20 Medical Facility

- | | |
|---|--|
| <p>1. DENTAL OPERATING ROOM 2</p> <p>2. DENTAL STOREROOM</p> <p>3. DENTAL DEPARTMENT OFFICE</p> <p>4. DENTAL X-RAY</p> <p>5. DENTAL DARKROOM</p> <p>6. DENTAL OPERATING ROOM 1</p> <p>7. MEDICAL STOREROOM 1</p> <p>8. P & A OFFICE</p> <p>9. MEDICAL X-RAY DARKROOM</p> <p>10. X-RAY ROOM (300 M.A. UNIT)</p> <p>11. WARD (19 BEDS)</p> <p>12. UTILITY ROOM</p> <p>13. WARD BATH</p> | <p>14. DIET PANTRY</p> <p>15. BACTERIOLOGICAL LAB</p> <p>16. QUIET ROOM (3 BEDS)</p> <p>17. QUIET ROOM BATH</p> <p>18. MEDICAL RECORDS OFFICE</p> <p>19. MEDICAL DEPARTMENT OFFICE</p> <p>20. CONSULTATION ROOM</p> <p>21. SURGICAL DRESSING ROOM AND
MAIN BATTLE DRESSING STATION</p> <p>22. STERILIZER ROOM</p> <p>23. OPERATING ROOM</p> <p>24. PHARMACY</p> <p>25. MEDICAL STOREROOM 2</p> |
|---|--|

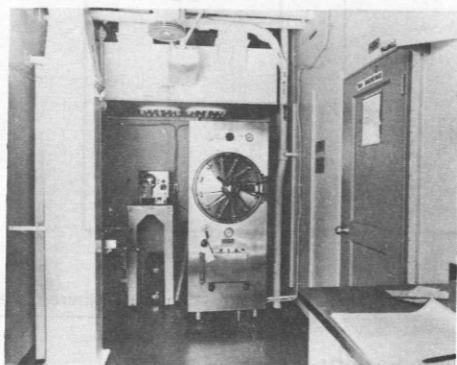
Figure 2.—Key to numbered spaces in Figure 1.



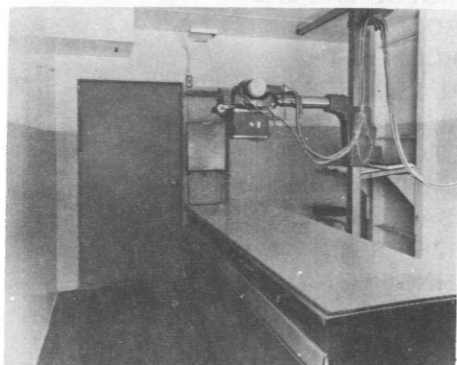
Surgical Dressing Room – Main Battle Dressing Station



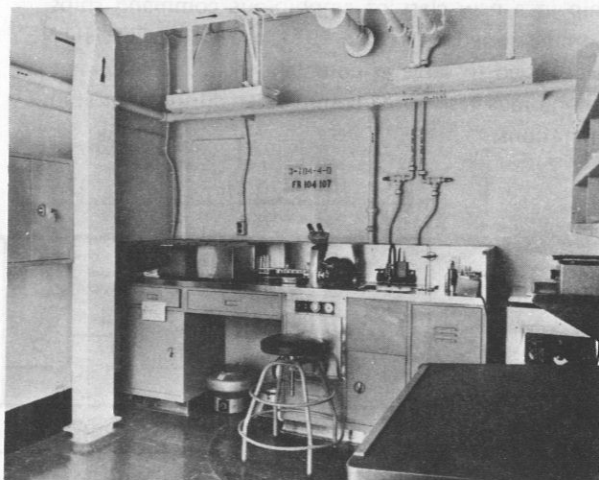
Operating Room



Sterilizing Room



X-ray Room



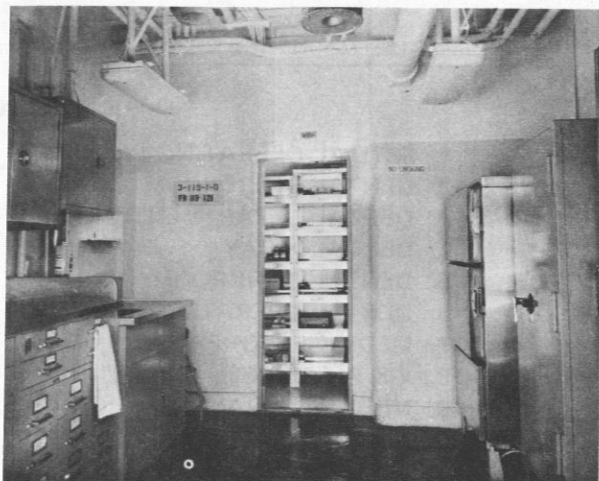
Clinical Laboratory

to be built from the keel up as amphibious command ships.

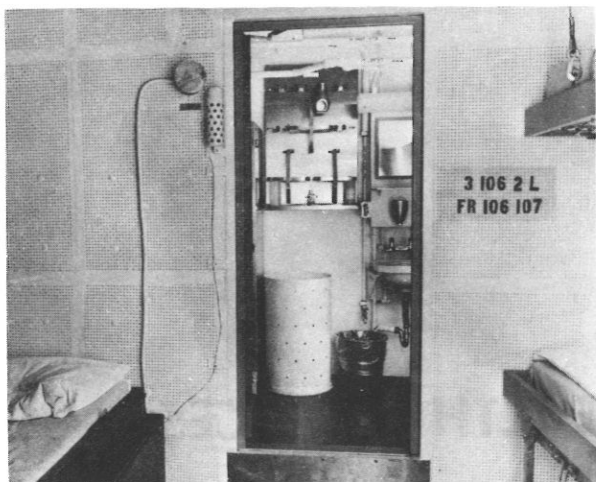
MOUNT WHITNEY is homeported in Norfolk, Va. CAPT Orlie G. Baird, USN, is the present and first Commanding Officer of LCC-20.

The Medical Department is headed by LT James S. Arline, MC, USNR. HMCS Gene E. Stuckey, USN, is the division chief. They are assisted by a staff of 13 hospital corpsmen.

During the third quarter of FY 72 the Medical Department saw 1,615 outpatients, performed 743 lab tests



Pharmacy

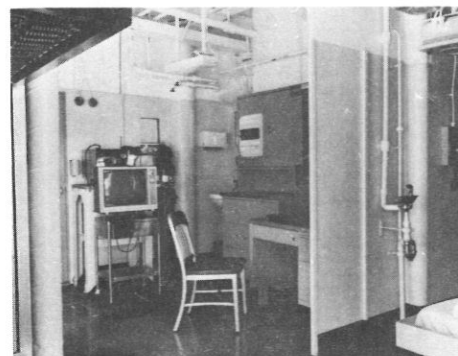


Quiet Room

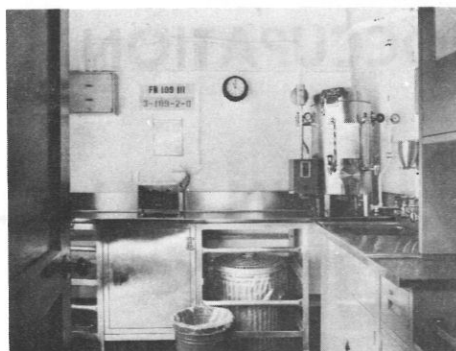
and 366 X-ray studies, filled 5,684 prescriptions, gave 448 immunizations, recorded 27 electrocardiograms, and conducted 38 complete physical examinations.

All this, along with first-aid training for the crew, and daily and weekly sanitation inspections, serves to make a full week for the Medical Department of the MOUNT WHITNEY.

It may not be shore duty, but it may well be some of the best sea duty afloat, according to our Medical Department informers. Accompanying photographs speak well for the appearance of Medical Departments at sea.



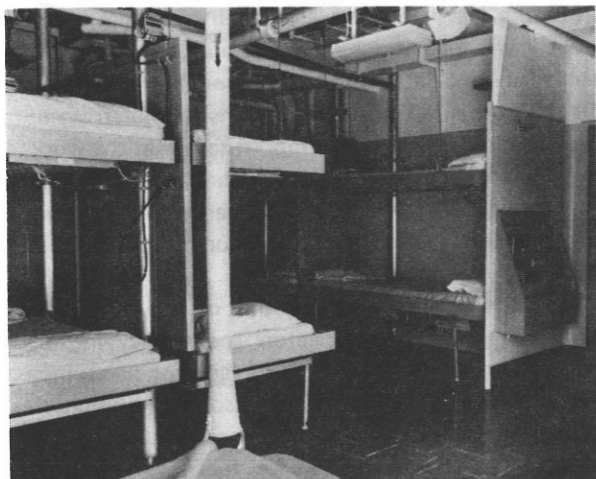
On the Ward



Diet Pantry



Medical Dept. Office



View of Ward



Medical Records Office

OCCUPATIONAL HEALTH SERVICES

IN NAVAL HOSPITALS

By CDR Francis V. Viola, III, MC, USN, Resident in Occupational Medicine,
Navy Industrial Environmental Health Center, Cincinnati, Ohio.

Who takes care of the people who take care of the people who are sick? Who takes care of the people who run the places where the sick people are cared for? How safe and healthful are the places where the caretakers work? Under the impetus of recent Federal legislation, the Navy took a new look at these questions in relation to its naval hospital system. The answers may seem obvious. They aren't.

OSHA

In December 1970, Congress passed the Occupational Safety and Health Act (OSHA), the purpose of which is "to assure safe and healthful working conditions for working men and women" by authorizing enforcement of the standards developed under the Act.¹ It will cover an estimated 57,000,000 government and private workers. Both the Act and a subsequent Presidential

Executive Order directed "each Federal agency to establish and maintain an effective and comprehensive occupational safety and health program . . ."^{1,2}

For the Navy this was another in the long line of public laws, regulations, and instructions covering health care and safety procedures for its workers.³ But this Act is far more comprehensive and stringent than any similar past legislation. It says that the work environment is to be made more healthful and safe than ever before, with strict standards to be set and enforced, applying to Federal and non-Federal employers and employees alike.

The OSHA provides for scrutiny of work places by Department of Labor inspectors and the levying of fines or closure of the business place for noncompliance with OSHA regulations. It also allows employees or their representatives to submit complaints to the Department of Labor if they feel that a violation of a safety or health standard exists which threatens physical harm or imminent danger.¹ Careful and detailed records are required of employers. This law has teeth that have bitten many an employer.

The opinions expressed herein are those of the author and cannot be construed as reflecting the views of the Navy Department or of the naval service at large.

NIEHC

With this background, the Bureau of Medicine and Surgery asked the Navy Industrial Environmental Health Center (NIEHC), Cincinnati, Ohio, to do a sample survey of naval hospitals to see what and how their occupational safety and health programs were doing. Navy occupational medicine is usually thought to be concerned primarily with shipyards, ordnance stations, air rework facilities, etc. But the health care delivery system of the Navy employs thousands of civilian and military personnel in a wide variety of occupations, with conventional work environment health and safety problems as well as those peculiar to hospitals and other medical care facilities.

NIEHC surveyed five hospitals, large and small, throughout the country. The NIEHC team, an occupational health physician and nurse, an industrial hygienist, and a sanitary engineer looked at a number of areas: facilities where physical examinations, sick call, and acute illness/injury were handled; adequacy of these accommodations; those who perform these tasks; qualifications of the performers; job classifications; population served; extent of health services delivered including such items as health education, counseling, medical screening tests, immunizations, etc.; compliance with existing regulations concerning employee health care; safety from occupational hazards in work areas such as laboratories, X-ray rooms and Public Works shops; status of sanitation control, and; effectiveness of antipollution measures.

It's difficult to fully assess a complex institution like a hospital in a few days. Information sources are often in conflict with one another as to details, and records are sometimes lacking. No attempt is made in this article to cover the entire spectrum of employee health services, as they should be, or, as they were found. Many specifics are omitted in order to make and clarify important general points. (The specifics are available if anyone is interested.) Because of these limiting conditions, exception can probably be taken to some of this report. Nevertheless, the basic points are correct.

FINDINGS OF NIEHC

If one word characterizes these programs in the naval hospitals, it's fragmentation. Responsibilities are split so many ways that no one really has a firm grasp of what's happening or what's needed. Major themes of occupational health are centralization, coordination and continuity of employee health services, and provision of healthful and safe work environments. The latter implies knowledge of occupations and their hazards,

topics in which hospital personnel are generally not too well versed.

As each hospital was surveyed, answers to the team's questions, with minor variations, became quite predictable beforehand. From one point of view, this at least suggested that a basically common system was present. The question from NIEHC's standpoint was: Why couldn't this established, albeit fragmented, system be consolidated into a more effective one? The conclusion was that probably nobody had ever tried. Reasons for this are both substantive and speculative. It should suffice to say that hospitals are geared primarily toward acute and chronic care. In general, they lack the type of preventive medicine orientation toward health care delivery to employees that characterizes industrial medical departments. The health of the staff often seems to be almost taken for granted.

This situation is not peculiar to naval hospitals which are probably better off in this respect than most civilian hospitals, where often few or no health services for employees are available.^{4,5,6} But if one adopts the large private and governmental industrial medical programs as models, then there is certainly room for improvement; for hospitals are industries — health industries — with staff as their workers and patients as their products.^{7,8} If hospitals set the example and standards for acute and chronic medical care, why not for preventive medical care,^{9,10,11} which is what occupational health is all about? It should be emphasized that the technical quality of personal medical care is not at issue here — only its extent and application to the employees' occupational needs and setting.

All of us in the Navy Medical Department with experience in naval hospitals and dispensaries recognize and sympathize with the ubiquitous problems of heavy patient loads, personnel shortages, and budget limitations. When one speaks of improving the occupational health program, some will only envision the imposition of more work and the requirement for more money, space and personnel. On the contrary, the nucleus of a good occupational health program for each hospital already exists. All that is needed is to eliminate the fragmentation, and reorganize the units into a unified health service for the entire staff, civilian and military. In fact, a reduction in cost, staff and space requirements with greater quality and extent of service should result. Let us consider some of the NIEHC findings and see if these statements hold true.

Facilities

The emergency room was the most common site designated for handling civilian and military health service functions and problems, both acute and routine. Other

sites included the outpatient department, general medical clinic, Physical Examination Room, and the officers' clinic. One hospital used four of these facilities to treat staff members. Three hospitals used the dispensaries of other commands, in addition to their own designated areas for civilian examinations and care. One of these dispensaries was located approximately two miles from the hospital. Responsibility for the examination sites was variously placed on the Chief of Surgery, Chief of Medicine, Chief of Outpatient Services, or the commands where distant dispensaries were located.

Personnel

The medical personnel staffing the hospital examination facilities are for the most part transient. Rotations are generally frequent through emergency rooms, outpatient departments and, possibly less so, through the medical clinics. Continuity of care on a physician-patient basis is accordingly very difficult to achieve. Only one hospital assigns a full-time medical officer to the Physical Examination Room.

The outlying dispensaries (used by the three hospitals) are industrially oriented, so their physicians and nurses have this advantage over their counterparts in the hospitals. With the exception of one dispensary, however, no medical personnel in either the hospitals or other dispensaries have had any formal training in occupational health. By admission, the hospital physicians were unfamiliar with work environments other than those of medical personnel. It was difficult, in fact, to find any medical personnel even minimally knowledgeable in the realm of industrial hygiene. Health hazards, sanitation, and safety problems were found in the hospitals. The obvious question is: Shouldn't medical personnel engaged in examining, qualifying, and clearing workers be required to have some reasonable knowledge of the employee's job requirements and his working conditions?

Records

Civilian and military records were kept in a variety of places, even within the same hospital. Some were kept in the dispensaries. Civilian health records were frequently not readily available when the employees were seen in sick call. Routing of recorded medical information was often circuitous and complicated. All record-keeping personnel agree that loss of medical records in transit presented a problem. Preservation of confidentiality was also difficult to maintain with this type of handling. Record-keeping procedures were not uniformly applied. Treatments given civilians for non-occupational problems were frequently not recorded. The diversity in log-keeping methods would render it

difficult to retrieve occupational statistical data. Forms were often incorrectly used (e.g., Dispensary Permit NAVSO 5100/9 was often used for recording medical findings). Confidential medical information was found written on other forms where it should not have appeared.

Return to Work Examinations

There was no consistency as to where employees were medically checked when returning to work from sick leave. They may be seen in any of the facilities mentioned above. The categories of medical personnel checking them were also diverse. Familiarity with work environments and job requirements does not seem to be one of the strong points of this system.

Physical Examination Scheduling

Civilian physical examinations are scheduled most often by the civilian personnel office, frequently by two or three different sections of this office. At one hospital, periodic examinations were scheduled by the Industrial Hygienist from another command. At some hospitals, no periodic examinations were done. The civilian personnel office of one hospital did not know who scheduled periodic examinations. Military examinations were generally scheduled by the military personnel office or by the Physical Examination Room.

Preventive Medicine Services

All the hospitals offered some type of screening or preventive health service, generally one or more of the following on a voluntary basis: chest X-rays, PPD skin tests, urinalysis, and influenza immunizations. Concerning the first three, the NIEHC team could find neither centralization of responsibility nor existing procedures for follow-up of these workers after they had been notified of the detection of an abnormality or positive finding. The workers were informed by sources such as a clerk in the civilian personnel office or a representative of the department in which the particular test was done.

Safety

There were no trained safety personnel in any of the hospitals, the title of Safety Officer being assigned as a collateral duty of either the Operating Services Officer or the resident Public Works Officer. One hospital had been surveyed on request by a safety expert from BUMED. Another utilized the services of a Safety Officer from a nearby command to perform periodic walk-through inspections primarily directed toward maintenance safety. Each department seemed to rely primarily on its own personnel to recognize and enforce

its own concepts of safety. At least one hospital had a Safety Policy Committee which met at variable intervals.

RECOMMENDATIONS

These are some of the problems. What about the solutions? The extent of fragmentation should be obvious by now. The appropriate corrective measures are really quite simple. Felton has provided sound guidelines for the development of occupational health programs, as have the American Medical Association and the American Hospital Association.^{12,13}

Facilities

It just makes more sense to have one centralized site rather than multiple areas in the same hospital and resorting to the use of geographically-distant facilities. Basic space needs must allow for offices for doctor and nurse, examining rooms, adequate work area for a clerk-typist-receptionist, and record storage. This may present the biggest problem of all in establishing a central clinic, but with a little effort, any hospital can find some place that can be used for this purpose. It must be remembered that the patient load here will not approach that of the busier departments presently being utilized.

The separation of examination areas into civilian and military, and military subdivision into officer and enlisted, although traditional, seems a somewhat unnecessary anachronism in modern health care delivery systems, especially in view of attempts to utilize available physicians more economically. If necessary, a system of priorities can be easily established in a single clinic.

The obvious problem with the emergency room, outpatient department and general clinics is that these departments are usually busy, and understandably the heavy patient loads are not conducive to concentration on the prevention orientation of an employee health service. In addition, there seems to be no significant reason why a hospital cannot furnish its own health services instead of relying on distant dispensaries. If nothing else, time lost from work and spent in travel should be a factor to consider.

Nothing else changes physically. The emergency room is still used for acute injury care and after-hours care, specialty clinics for consultations and special tests, and laboratories and X-ray as before. No duplication and a minimum of equipment is required. One single clinic would serve as the focal point for health care and information about the workers and their work environments. Scheduling, referral, follow-up, and other communication could now be accomplished by one or two people who are familiar with the employee and his

problem or need, and who have a continuing interest in him. Employees would have a place to go where their desire for more personalized service is satisfied, and where the medical personnel know something about the jobs and work places. Under the present systems, there is almost no way to achieve these goals on a routine basis.

Personnel

Personnel staffing such a clinic should be chosen on the basis of interest and relative permanence as well as capability. Since continuity is so important, the medical officer should assume these duties as a full-time job. A nurse should also be assigned, preferably civilian, since she is potentially more permanent than a military nurse. A good civilian clerk-typist can handle all the scheduling, record-keeping, correspondence, and related functions. If patient load dictates, Hospital Corps personnel or another physician may be added on a part-time basis for peak periods. This suggested "in-house" staffing would decrease the number of people involved as compared with present systems and will certainly simplify and improve the effectiveness of the whole operation.

To insure the best service possible, orientation training in occupational health, industrial hygiene, safety, and the mechanics of Civil Service health care administration should be furnished to the assigned medical personnel. This can be done with relatively little expenditure of time and money. Information on available short courses, workshops, correspondence courses, pertinent literature, regulations, and consultation services is available from NIEHC. The health service physician should be a standing member of the hospital Infection Control and Safety Committees, where these are established. He can furnish valuable input about the workers' health problems and their work environments.

Records

The advantages of keeping all health records in a centralized place are many: accessibility, ease of maintenance, reduction of loss, greater accuracy and uniformity in recording information, and better control of confidentiality.

Safety

The advantages of having hospital safety policy and practices established and directed by experts are obvious and need no elaboration. Employee health clinic personnel should be sufficiently knowledgeable about the peculiarities of hospital safety, as well as conventional job safety, to enable them to recognize and handle the most common problems.

CONCLUSION

Basically, these are some of the more important features of many aspects of a hospital employee health program. The solutions offered may sound naively simple, but they work. If they can work in an industrial setting, with reasonable effort and diligence they can also work in hospitals.

Nothing anywhere says that every program must be the same, or that there can't be local variations in operating procedures. That's relatively unimportant. To establish the program and to make it easy, do three things and watch it work: tie it all together, put it under one roof, and get some interested and knowledgeable people to run it.

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THE PROSTHETIC EYE



CDR Dorsey J. Moore, DC, USN, Head of the Maxillofacial Prosthetics Division, Naval Graduate Dental School, explains the fabrication and function of a prosthetic eye to high school biology students and their teacher during their visit to the National Naval Medical Center.—PAO, NNMC, Bethesda, Md.



At Naval Hospital, Port Hueneme

Few would argue the wisdom of devoting reasonable forethought to the subject of disaster preparedness. Yet all too often we get caught up in exigent requirements of day-to-day efforts, consoling ourselves that simulated disasters are never very real, that one can seldom predict with accuracy what unique set of circumstances might arise to confound the best laid plans, and that seasoned veterans will somehow miraculously guide and lead the uninitiated participants whose motivation and dedication traditionally emerge to save the day. Even worse than the "We'll muddle through" philosophy, is the "We've promulgated directives" cult. The latter devotees self-righteously pay

lip service to the concept of preparedness, affixing administrative responsibility for interpreting and implementing the content of historic documents on those unfortunates who are doomed. Such unfortunates are doomed to accountability in the event that performance is found lacking, or doomed to oblivion in the event that no disaster ever develops, or the disaster which does develop is efficiently handled without incident.

No advocate of the "We'll muddle through" or "We've promulgated directives" concepts, the Naval Hospital at Port Hueneme, Calif., has realistically tackled the problem of maintaining disaster readiness.



Evacuation of casualties by ship's crew



Casualty being placed on stretcher



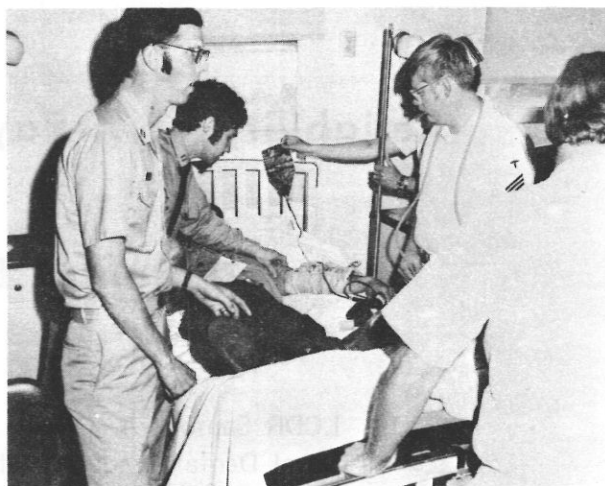
Casualties being loaded aboard flatbed truck



Unloading casualties from truck at Naval Hospital



Minor injury in triage



Readying for transfusion on ward

Readers might do well to reflect a moment on the following sample of disaster consciousness. How prepared are you?

On 9 June 1972 the Naval Hospital Port Hueneme and the USS NORTON SOUND (AVM-1), homeported at Port Hueneme, conducted a joint disaster drill. At 1405 while conversion from ship's power to shore power was underway, a simulated explosion occurred in the engine room of NORTON SOUND. At 1500 the OOD in NORTON SOUND advised the Hospital that there were numerous "casualties," and requested assistance. The Naval Hospital Mass Casualty Plan was activated and at 1504 hospital ambulances and medical personnel were on the scene. Fifteen seriously injured casualties and 20 walking wounded were evacuated from the ship and transported to the Naval Hospital by hospital ambulances

and other available vehicles. Patients were sorted and received emergency lifesaving treatment in the hospital triage area. Patients were appropriately removed to the X-ray department, operating rooms, minor casualty areas, or were admitted to the hospital wards.

The Naval Hospital Mass Casualty Plan provides for assistance in transportation from the CB Center, and for litter bearers from the Naval Schools, Construction at the Center.

While not an area-wide disaster drill, the exercise was conducted with the enthusiastic support of the Commanding Officer of USS NORTON SOUND, providing a very realistic opportunity to exercise and coordinate the disaster plans of the ship and the Naval Hospital. Both the Commanding Officers considered the exercise a success and well worth the effort. 🌿

Reliability of X-Ray Scores in the Navy

Periodontal Disease Index

By LCDR Sanford A. Glazer, DC, USN,* Periodontics Dept.,
Naval Dental Graduate School, National Naval Medical
Center, Bethesda, Md.

In September of 1969, the Navy Dental Corps introduced the Navy Periodontal Disease Index (NPDI). The NPDI was designed to screen naval personnel for periodontal disease and to place them into treatment categories determined by a gingival score and an X-ray score.

In a two-part study conducted at the Naval Graduate Dental School,** the NPDI was evaluated to determine the consistency with which patients were placed into the three treatment categories as outlined in Table 1.

Part I

In Part I of the study, eleven patients were selected at random from the population of the National Naval

Medical Center, Bethesda, Md. Each patient was examined by six examiners: two first-year residents in periodontics, and four dentists with no advanced training in periodontics. The examination was conducted according to the instructions set forth in BUMED letter 6600 of 12 May 1969.

The following results were noted: 1) There was considerable variation in the distribution of patient assignment into treatment categories by all examiners, as shown in Table 2; 2) There was a wide variation in categorizations determined by those trained and untrained in periodontics with respect to Categories I and II, as shown in Table 3; 3) When patients were categorized according to gingival score alone, that is, excluding the X-ray score, there was consistent agreement within and between the examining groups (see Table 4); 4) Without the X-ray score, 95% of the patients were placed in Category I (and none in Category II) by both examining groups.

The results of Part I indicated that radiographic interpretation was responsible for the variation among and between examiners for placement of the patients into the treatment categories.

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**"Navy Periodontal Disease Index," Graduate Officers Report 1970, by LCDR S.A. Glazer, DC, USN, and CDR R.C. Mc Murdock, Jr., DC, USN.

The opinions expressed herein are those of the author and cannot be construed as reflecting the views of the Navy Department or of the naval service at large.

TABLE 1 - TREATMENT CATEGORIES

Treatment Category	Performed by	Treatment Indicated
I	Auxiliary personnel	Oral prophylaxis, cariostatic agents, plaque control instruction
II	General practitioner	Same as above plus complete oral examination, full mouth radiographs, pocket depth determination for each tooth, periodontal treatment plus periodic recall (maintenance)
III	General practitioner and/or periodontist	Same as above with 3-4 month maintenance treatments, or referral to periodontal clinic

TABLE 2

Patient Distribution Into Treatment Categories With Gingival and X-Ray Scores

Patients	Examiners Assigning Treatment Categories					
	Advanced Training in periodontics (2)		No Advanced Training in periodontics (4)			
	A	B	C	D	E	F
1	I	I	II	I	II	II
2	II	II	II	II	II	II
3	I	I	I	I	I	II
4	I	II	II	II	II	II
5	II	III	II	III	III	II
6	II	I	II	I	I	II
7	I	I	II	--	II	II
8	I	I	II	--	II	II
9	II	II	II	--	II	II
10	II	II	II	--	II	II
11	I	I	II	--	II	II

TABLE 3

PATIENT DISTRIBUTION INTO TREATMENT
CATEGORIES BY PERCENTAGE

Examiners	CATEGORY		
	I	II	III
Advanced training in Periodontics (2)	55%	40%	5%
No advanced training in Periodontics (4)	15%	80%	5%

Part II

Part II of the study was conducted to determine the reproducibility of the NPDI X-ray scores. Radiographs of twelve patients were read and scored individually for presence or absence of the corticalis. Fifteen dentists who were either board certified or board qualified in periodontics, or engaged in residency training in periodontics, read the six X-ray studies for each patient as specified in the directive, for a total of 72 individual X-rays. The following scoring system was utilized: if there was agreement among 13-15 periodontists on an individual reading, the result was considered *acceptable*;

TABLE 4

PATIENT DISTRIBUTION INTO TREATMENT CATEGORIES BY GINGIVAL SCORE ONLY

Patients	Examiners (6)					
	Advanced training in Periodontics (2)		No advanced training in Periodontics (4)			
	A	B	C	D	E	F
1	I	I	I	I	I	I
2	I	I	I	I	I	I
3	I	I	I	I	I	I
4	I	I	I	I	I	I
5	I	III	I	III	III	I
6	I	I	I	--	I	I
7	I	I	I	--	I	I
8	I	I	I	--	I	I
9	I	I	I	--	I	I
10	I	I	I	--	I	I
11	I	I	I	--	I	I

TABLE 5 - X-RAY EVALUATION

Dentists in Agreement	Comment	Readings
7-9	Unacceptable	22 (30%)
10-12	Borderline	33 (46%)
13-15	Acceptable	17 (24%)

if 10-12 examiners agreed, the result was *borderline*; and if only 7-9 examiners agreed on an individual reading, the result was considered *unacceptable*.

Of the 72 readings, 17 readings (24%) were acceptable; 33 readings (46%) were borderline; and 22 readings (30%) were unacceptable. (See Table 5.) Part II of the study demonstrated that there is too wide a variation between X-ray interpretations for this diagnostic aid to be incorporated as part of an index which is directed toward treatment recommendations.

Summary

The findings of Part I and II indicate that: 1) There was generally a wide variation among examiners in

placement of patients in Categories I and II when the NPDI was used (including gingival and X-ray score). 2) Consistent categorization was obtained when either the gingival or the pocket score was used (X-ray score not included). 3) There is too wide a variation in interpretation of X-rays to recommend their incorporation into an index. 4) The gingival and pocket scores can be used to categorize patients accurately and consistently into periodontal treatment groups.

(NOTE: Subsequent to the completion of this study, the original Navy Periodontal Screening Examination was modified, eliminating the radiographic portion. Full details of the revised NPDI are provided in BUMEDINST 6600.7.)

NAVY NURSE CORPS CANDIDATE

Cynthia V. Kaires was sworn into the Navy by her father, CAPT (now RADM) Anthony Kaires of the Naval Dental Corps, at the Washington Navy Recruiting District Office in Washington, D.C. Miss Kaires is a junior at Villanova University School of Nursing in Pennsylvania. During her last two years of study, she will attend college under a nursing scholarship as a member of the Navy Nurse Corps Candidate Program. By joining the Navy, Miss Kaires is keeping the tradition of her Navy family intact. Her sister, Pamela Kaires, is a LT(jg) attending George Washington University School of Medicine.

Following graduation from Villanova in 1974, commissioning and State Board licensure, Miss Kaires will report to the Officer Indoctrination School, Newport, R.I. Following indoctrination she will be assigned to a U.S. naval hospital for duty.

RADM Kaires is presently the Inspector General, Dental and Assistant Chief of the Dental Division, BUMED.—PAO, BUMED.



FOLLOW ME — CAPT Kaires (now RADM), DC, USN (left), had the honor of "swearing in" his daughter, Cynthia V. Kaires (right) at the Washington Navy Recruiting District Office in Washington, D.C.

The Naval Hospital and Nosocomial Infection Control

By LT Patrick A. Truman, MSC, USN,* Environmental
Health Officer, Navy Environmental and Preventive
Medicine Unit No. 2, Norfolk, Virginia.

Background

Between February 1970 and July 1971, Navy Environmental and Preventive Medicine Unit No. 2, Norfolk, Va., received requests to evaluate the nosocomial infection control programs of six East Coast naval hospitals. These hospitals varied in size from more than 1200 beds to as few as 50 beds.

Two of these requests were generated after epidemics caused by gram-negative organisms had occurred in such areas as newborn nurseries and pediatric wards, whereas the other requests came from hospitals which were not experiencing any apparent outbreaks of nosocomial infections. This report comprises the findings resulting from these surveys.

Infection Surveillance

The surveillance programs at all the hospitals were characterized by inadequate infection-reporting procedures which reduced their reliability and value. The situation was further complicated by the failure of

infection committees to define what constitutes an infection and how it should be reported. In the majority of the hospitals, it was the responsibility of each individual physician to report infections to the acting head of his service. The chief of each service then reported the total number of infections on his service to the infection committee.

This system results in gross under-reporting of infections for a variety of reasons that run the gamut, from the physician's forgetting to report an infection, to the physician's belief that reported infections indicate liability on the physician's part. Indicative of the under-reporting of infections is the nosocomial infection rate of one-half of one per cent alleged by a large teaching hospital. Current data indicate that an average teaching hospital would normally expect to have a nosocomial infection rate ranging from 5-15/100 admissions, with an even higher rate on certain services, such as urology.^{1,2,3}

A much better method for collecting data would be to designate or assign a specially-trained nurse or environmental health officer who assumes responsibility for the surveillance program. This individual would collect data to establish the hospital endemic (baseline) infection rate, in order to permit early identification of deviation from this norm and rapid institution of control measures.⁴

*LT Truman is now Head, Environmental Health Branch of the Preventive Medicine Division in the Bureau of Medicine and Surgery, Washington, D.C. 20390.

Microbial Monitoring

Microbial monitoring of the hospital environment, where carried out, generally resulted in the amassing of data which could not be interpreted and was therefore nonproductive. These programs were ineffective because the program objectives had not been previously defined.

Regular environmental monitoring can be an effective tool when used properly. It should be remembered that the information to be gained from this procedure is limited. Specifically, routine environmental culturing should be useful in: (1) determining the microbial flora of the hospital; (2) rating the effectiveness of housekeeping procedures, and; (3) evaluating cleaning products already in use, and those being contemplated for use, to determine their efficacy.

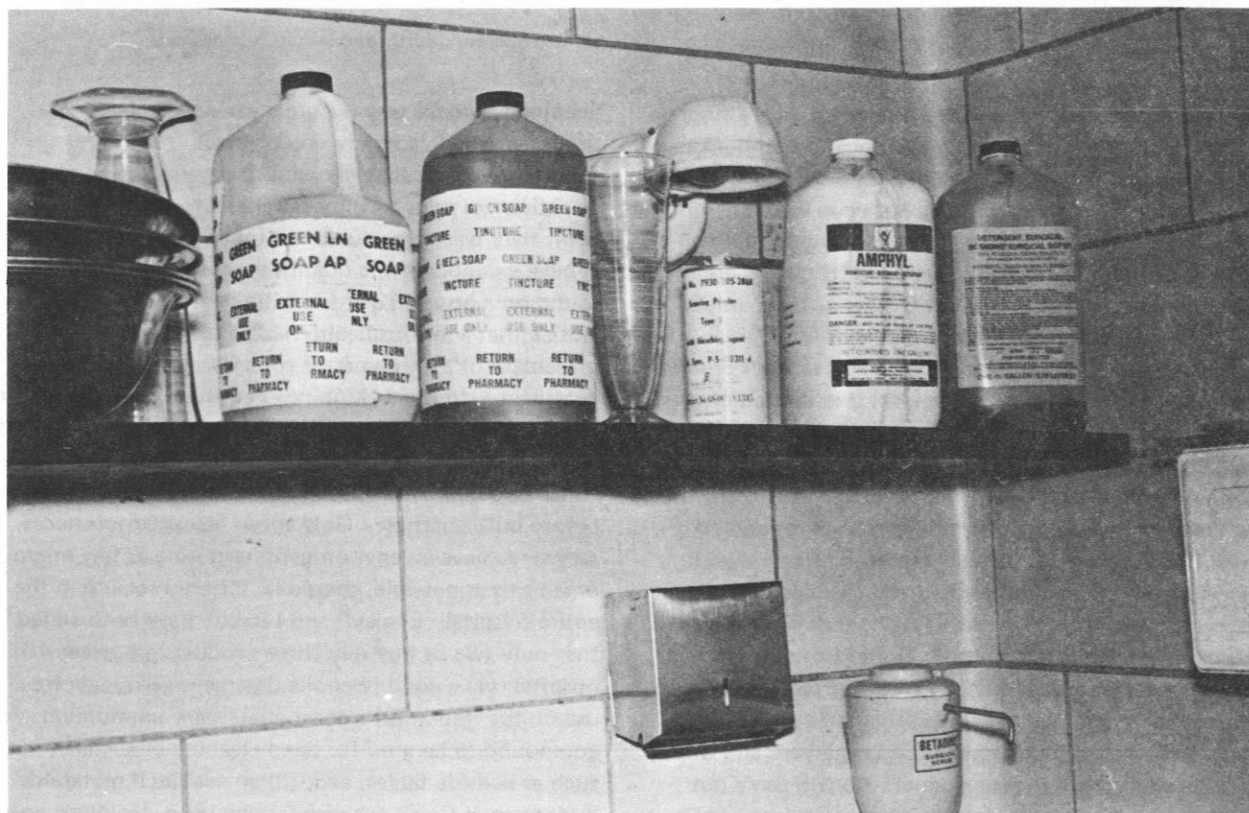
Housekeeping Practices

Because the cleanliness of the hospital is a reflection of the housekeeping procedures employed, cleaning procedures were closely observed. Particular emphasis was placed on floor cleaning techniques, for at the present

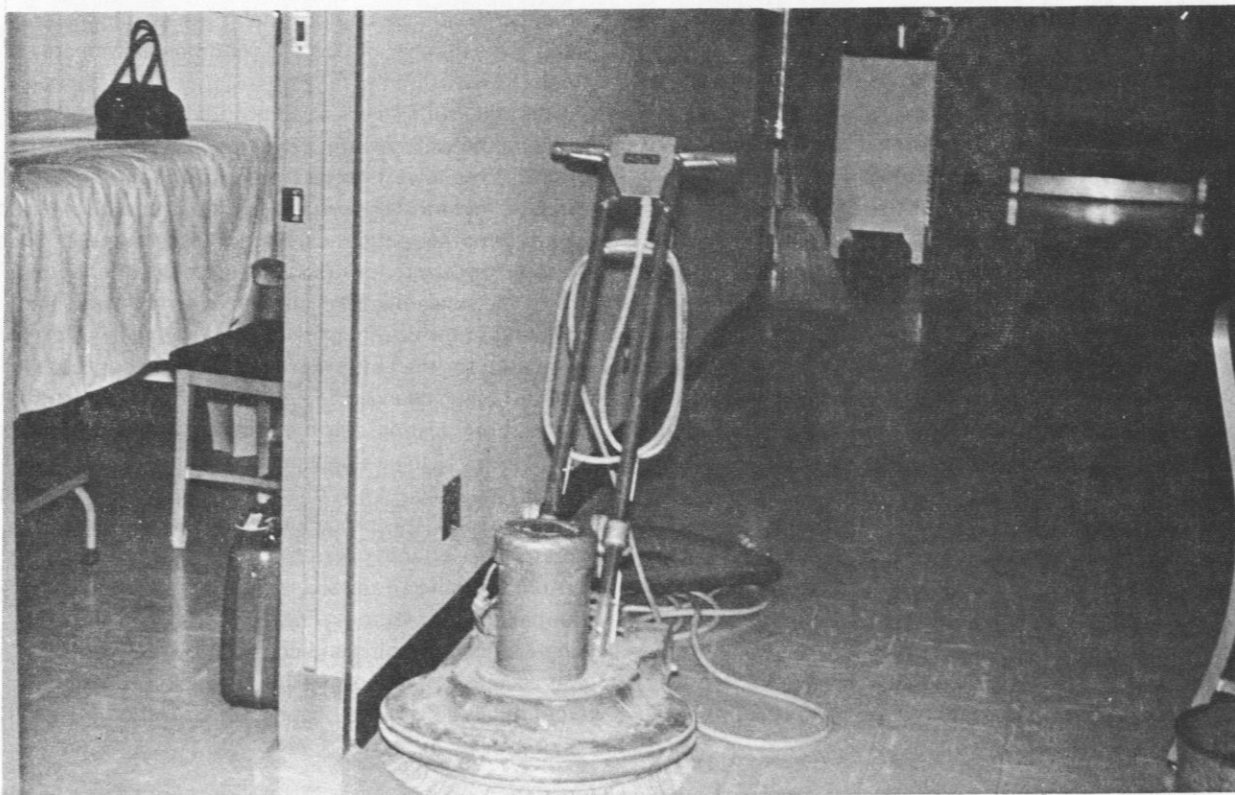
time the cleanliness of a hospital is assessed by determining the number of bacteria found on a given area of floor.

Operating suite floors of all hospitals were cleaned utilizing the wet vacuum technique, a procedure which produces the lowest bacterial counts of any standard cleaning method. Unfortunately, this technique was not utilized in other patient care and treatment areas. Such areas as wards and nurseries were normally cleaned by use of the single-bucket technique whereby the single mop and single bucket of detergent-germicide solution were used for the entire ward or nursery floor, usually without being changed. The Litsky's⁵ have shown that without pre-dusting, this method of cleaning is extremely ineffective. Using a single-bucket cleaning procedure, the microbial count can only be reduced by 60% at best, while at worst, this procedure could lead to higher counts after cleaning than before!

An alternative to the single-bucket technique is the double-bucket method. This is more effective than single-bucket cleaning and considerably cheaper than wet vacuuming. A normal double-bucket program would include: (1) pre-dusting or removal of gross soil



A variety of cleaning and detergent - germicide products usually found at naval hospitals. Note the unfortunate position of Amphyl bottle next to bottle of Betadine on the far right end of shelf.



A typical buffer employed throughout a hospital (including operating suites and public passageways)

utilizing chemically-treated cloths, except where floor conductivity is a factor, and; (2) using the two-bucket-mop system. Detergent-germicide is contained in one bucket and the second contains hot rinse water.

Double-bucket cleaning with pre-dusting should be considered for use in patient care and treatment areas of all naval hospitals because with this method, microbial counts can be consistently reduced by 99.5%.⁵

The hospital patient must be provided an environment that is not only physically clean but also microbiologically clean. To achieve this, the best cleaning methods must be employed. This implies, however, that the personnel responsible, both civilian and military, know the proper cleaning procedures and cleaning products to use. Such was not the case at the hospitals surveyed; none had promulgated standardized cleaning manuals or even conducted formal training courses in proper cleaning methods for the staff. Rapid turnover among civilian housekeeping staff and frequent reassignment of the military staff dictates that regular training courses be provided for new housekeeping employees and those newly-assigned military personnel who will carry out certain cleaning duties. A cleaning manual is the basic reference from which such a training course is developed.

Another factor influencing the effectiveness of house-

keeping programs was the great variety of cleaning products available in any one hospital. Cleaning products were rarely evaluated to determine their effectiveness prior to their purchase; following procurement they were often used for the wrong purpose. A typical example of the quantities and types of products found on a hospital ward may be seen in Figure No. 1. Notice that a serious health hazard is presented by the placement of a container of concentrated phenolic detergent-germicide (Amphyl) next to a similarly shaped container of Betadine normally used in this hospital as a liquid germicide for washing hands. Considerable money could be saved by proper evaluation of cleaning products before bulk purchase. Only those few products necessary to achieve an environment harboring as few microorganisms as possible, should be selected for use in the entire hospital. Engley⁶ and Litsky⁷ have both stated that only two or possibly three products are needed in a hospital: (1) a good phenolic detergent-germicide for use on the floors; (2) a good quaternary ammonium compound to be used for hand cleaning of surfaces such as bedside tables, and; (3) an activated glutaraldehyde such as Cidex for disinfecting IPPB, Isolettes, anesthesia equipment, and the like. A phenolic product could be substituted for the quaternary ammonium

compound when cleaning surfaces other than floors provided that gloves are worn to discourage the development of allergic reactions or contact dermatitis in the users.

Buffers (Figure No. 2) were commonly used in patient treatment and care areas including operating rooms, intensive care units and recovery rooms. This is a dangerous practice in the operating room, particularly after a "dirty" case, for a significant, infectious aerosol is created by the buffer; the droplets disperse and contaminate surrounding surfaces, including the next patient and the O.R. staff. Patients in I.C.U./Recovery rooms are at even greater risk through inhalation of dense infectious aerosols. If high gloss floors are desired, numerous commercial floor finishes may be obtained which present a high gloss and do not require buffing.

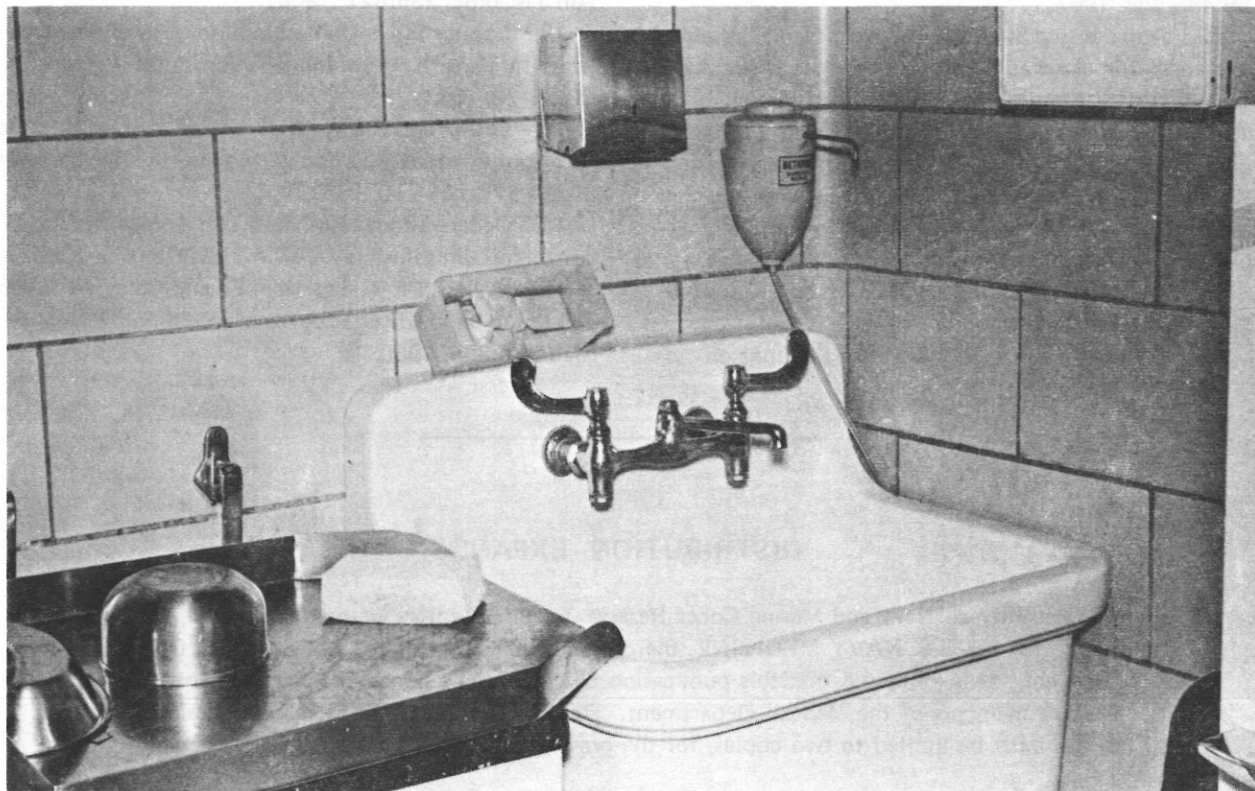
Fogging was still used as a means of decontaminating isolation rooms in some hospitals. One particular product being used contains phenol, whose vapors not only present very irritating fumes, but are also very toxic. Conclusive data provide no valid evidence that fogging is an effective technique for terminal disinfection of a room.^{8,9}

Poor hospital design and poor maintenance often discouraged proper hand-washing techniques in patient treatment and care areas. Sinks were few in number,

often improperly located, and usually lacked arm or foot-operated controls. Some towel dispensers required laborious turning of a crank to obtain a towel. Bars of soap were located at most sinks, even those equipped with foot-operated soap dispenser (Figure No. 3). It is well documented that improperly stored bar soap (including that containing hexachlorophene) can support large numbers of microorganisms, many of which may be pathogens.¹⁰

Disinfectants

Aqueous benzalkonium chloride was observed being used for a variety of purposes, including urinary catheter care, skin disinfection, and routine surface cleaning. It is doubtful that this product should be employed at all in a hospital since contaminated benzalkonium chloride has been frequently incriminated as a source of numerous nosocomial infections.^{11,12,13,14,15} In addition to having no effect on gram-negative organisms, this product is also easily inactivated by cotton, gauze, soap, and other organic materials. Many other products such as alcohol, soap and water, iodophors, phenolics, and lubricating jelly (with or without antibiotics) may be more properly substituted according to the need.



All too frequently, hand-washing facilities offer a foot-operated soap dispenser and improperly stored and used bar-soap scraps.

Conclusions

Control of hospital-acquired infections has always been important. It is particularly so now with the development of long, involved surgical and medical procedures that further increase the risk of infection.

Since these surveys were conducted, increased awareness of nosocomial infection control by some naval hospitals has resulted in the initiation of effective infection control programs, upgrading of housekeeping procedures, and publishing of housekeeping manuals. Hopefully, this increased awareness of nosocomial infection control will persist and spread. Effective surveillance programs must be developed in all of our health care delivery facilities. The programs will save money, time, and most important, lives.

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DISTRIBUTION EXPANDS

Recently all Navy and Marine Corps Reserve Training Centers were added to the distribution list for U.S. NAVY MEDICINE, the official publication of the Navy Medical Department. It is requested that this publication be circulated among the Training Centers' Reserve members of the Medical Department. Due to a limitation in funds, each training center must be limited to two copies, for the present time. ☛

LAMINAR AIRFLOW

Much has been written about the construction of the conventional operating room with standard maintenance of humidity, temperature, positive pressure and rate of air exchange. Despite continued effort, we have not appreciably reduced the air contaminants in the operating room. In the past few years, attention has hopefully focused on the laminar airflow rooms developed by the aerospace specialists.

Looking to the future in operating room nursing, our students were assigned the task of writing a short synopsis on laminar airflow. The two papers which follow constitute a happy result of that assignment.

I note, at present, that laminar-flow control is planned for a number of naval hospital operating rooms. The average reader of U.S. NAVY MEDICINE may find these articles pertinent and informative.

CDR Alvina M. Harrison, NC, USNR
Operating Room Instructor,
Operating Room Technique & Management Course,
Naval Hospital Long Beach, Calif.

Laminar Airflow: An Adjunct for Infection Control in the Operating Room

By LT Sandra Gotch, NC, USNR,*
Naval Hospital Long Beach, California.

The cost of hospitalization is spiraling, and anything that prolongs hospitalization increases costs. Infections

*LT Gotch is presently a member of the staff at Naval Hospital, Long Beach. The above paper was submitted in partial fulfillment of the requirements for the six-month course in Operating Room Technique and Management conducted at Long Beach Naval Hospital in 1971-1972.

The opinions or assertions expressed in the above article are those of the author and are not to be construed as official or reflecting the views of the Navy Department or the naval service at large.

play a major role in prolonging and complicating hospitalization and we, as a portion of the medical team, bear the responsibility to prevent and minimize the incidence of infection. In the operating room we exercise control over one important aspect of the patient's hospitalization. Keeping this responsibility in mind, we are obligated to employ the safest of techniques and useful innovations for decreasing infection rates.

It has long been recognized that most contaminants originate with the surgical team itself. The highest

bacterial count is found on the skin, even after repeated scrubbing. Bacteria are shed, become airborne, and contaminate the patient. The airborne route of contamination is highly significant in the spread of infections in the operating room. There is a definite correlation between infection incidence and the number of people in the room, the degree of activity, and the bacterial population of the air. By exercising suitable control, all of these potential dangers can be minimized.

One method of control is laminar airflow. Clean air is introduced by unidirectional flow to produce a positive movement in a predetermined direction. The air enters through a ceiling or wall bank after being filtered by a high-efficiency particulate filter, flowing across a room in a single vertical or horizontal movement. There can be between 100 to 600 air exchanges per hour. The air is frequently exhausted through a grated floor that inhibits recirculation. Turbulence will occur when the airflow strikes an irregular object.

The preferred type seems to be that which provides horizontal flow, especially if the unit is portable. This allows for the use of existing lighting and will keep down the overall cost. Such units were quite noisy

when first introduced, but newer models are no louder than an air-conditioning unit. The small space contained within a heavy plastic curtain automatically limits the number of people and degree of movement. Since the curtain tends to be electrostatic, the use of explosive anesthetics is precluded. Special care of the filter is important. The prefilter must be cleaned monthly. The delicate filter, itself, should be changed every two years; however, it should also be visually examined frequently for holes or leaks at the bank site. Temperature is another factor to be considered. The newer units can maintain a temperature of 70° (Fahr.), and the surgical team is comfortable. The average cost of a portable unit is \$8,000 — \$10,000. At the present time, these units are primarily reserved for use in high-risk surgery and are proving quite satisfactory.

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LAMINAR AIRFLOW

By LT Sally Lane, NC, USNR,*
Naval Hospital, Great Lakes, Illinois.

The laminar flow concept is based on unidirectional airflow, through high-efficiency particulate air filters placed over the entire ceiling (downflow) or over one end wall (crossflow) of a room, at a velocity up to 100 feet per minute. Approximately 95 percent of this is recirculated air, and the remaining five percent is fresh made-up air. In a downflow room, air is returned

through a grated floor plenum with prefilters; in a crossflow room, the wall opposite the high-efficiency particulate air filters is equipped with prefilters and serves as the return air plenum.¹ Plenum is a fully occupied, enclosed space containing air under greater pressure than that of the outside atmosphere.

Several experimental laminar flow operating rooms, incorporating both downflow and crossflow designs, have been constructed and are now being evaluated.

A prototype laminar crossflow facility for potential use in the care of low-resistance hospital patients has been built and partially evaluated at the University of Minnesota. "The experimental results show that levels of microbial air and surface contamination in such a facility can be maintained significantly below presently attainable levels in critical areas of hospitals and at

*LT Lane was among the first to complete the six-month course of the Operating Room Technique and Management School at Naval Hospital Long Beach, Calif., since relocation of the School at Long Beach in Oct 1971. The above paper was submitted in partial fulfillment of the requirements of that course.

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least as low as those being attained in plastic tent isolators. Extraneous contaminants reaching the 'patient' also can be kept at very low levels. Patient comfort, freedom of movement for personnel and minimization of housekeeping needs are also encouraging features of the facility.

"Large staffing requirements, the possibility of human error compromising sterile technique, and autogenous contamination from the patient himself remain as problems in the operation of such a facility, although all of these are also problems currently encountered in the operation of plastic tent isolators."¹

The application of the laminar flow principle to the operating room can produce significant reduction in the level of airborne contamination. Experience with a new neurosurgical suite at the National Institutes of Health has demonstrated that 10-200 microorganisms/100 cu ft of air (average of 60 organisms/100 cu ft air) are recovered from routine air samples obtained during neurosurgical procedures. The laminar airflow ventilation system, on the other hand, has demonstrated levels of airborne contamination of less than five microorganisms/100 cu ft air without the necessity of altering typical routines and standard procedures of the neurosurgical team.²

Extensive use of gowning and draping does not appear to decrease the level of airborne contamination in the sterile field of a laminar crossflow operating room. This finding suggests that some elimination of draping and gowning procedures may be possible with the use of the laminar flow design, without jeopardizing aseptic standards. Beneficial effects in the areas of reduced personnel restriction, and fiscal and logistic economy might then be realized.³

Perhaps the most important adaptations which nurses are called upon to make are those concerned with the amount of noise created by the blowers, the continuous

movement of air as it proceeds downward and out of the area, and the confined aspect of the work area.

The noise produced by the blowers is significantly greater than that of average air-conditioning units and other plenum ventilation. Some nurses have been able to adapt to it, but others have not. Some nurses claim that the noise wears on one's nerves, and after a few hours in the room it is difficult to hear and understand the surgeons. The noise has been likened to that produced in an office where typewriters and telephones are in constant use. Most surgeons do not find it particularly unpleasant, however, a surgeon is in and out of the room for a few hours at a time, whereas the scrub and circulating nurses are frequently assigned to the room for an entire day.³

Although the air is humidified and the temperature controlled, nurses who scrub and circulate in this room all day may be disturbed by the constant downward flow of air. In one way this has worked to advantage, discouraging traffic in and out of this operating room. One of the major advantages associated with the air movement is the rapid removal of unpleasant odors. Finally, less risk to personnel should result when they work with contaminated cases in rooms equipped with laminar airflow.³

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JULY STATISTICS IN MEDI-GRAM

The Tidewater area Naval Regional Medical Center (NRMC) Newsletter reported there were 61,911 outpatient visits to NRMC Branch Dispensaries and 21,056 to the Naval Hospital Portsmouth, Va., during the month of July. In addition, there were 4,170 inpatient visits to the hospital. Both the Boone Clinic and the old dispensary facility at Little Creek accounted for almost one-third of all NRMC outpatient visits with a total of 20,144. 🐾

Calcaneal Stress Fractures: Clinical and Progressive Roentgen Features

By LCDR Richard F. Rosenberg, MC, USNR; Department
of Radiology, Navy Medical Detachment, Marine Corps
Recruit Depot, Parris Island, S.C.

The Marine recruit training program at Parris Island, S.C., is a nine-week, three-phase endeavor totaling 1072 hours. Phase one consists of three weeks of basic military training with emphasis on drill, physical exercise, close combat, and military subjects. Phase two is devoted to two weeks of marksmanship and one week of mess and maintenance; no physical training occurs during this period. The last three-week phase consists of advanced basic training culminating in the final physical fitness and drill tests. Command inspection and graduation mark the end of recruit training. Because of the emphasis placed on drill and physical exercise, there is fertile ground for the development of stress fractures. The purpose of this paper is to describe the clinical and progressive roentgen changes seen in calcaneal stress fractures based on experience with over 200 cases, including two female recruits.

CLINICAL FINDINGS

Recruits present initially with heel pain particularly on marching and running. This is seen in virtually 100% of cases. On examination, point tenderness is often demonstrated although this is not universal. Diffuse heel pain may be present. There is no history of significant trauma. Associated findings may also include edema and, at times, purplish discoloration about the soft tissues of the calcaneus. At this point a single lateral roentgenogram of the calcaneus is obtained which serves as a baseline study. If there are initial clinical and no positive roentgen findings, the recruit is placed on a light duty regimen — no running, physical training, or marching for three days — with reexamination seven to ten days later. In the presence of positive clinical and radiographic findings, the recruit is placed in the Medical Rehabilitation Platoon (MRP) and is reexamined at one-week intervals. Invariably, with minimal weight bearing and no physical activity or marching, the pain and edema subside almost immediately. The average stay in MRP for calcaneal stress fractures is approximately four to six weeks.

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ROENTGEN FEATURES

The initial lateral film of the calcaneus is most often normal (Figure 1), even in those cases with the most advanced clinical findings. Reexamination at 10-14 days then reveals a faint to moderately dense sclerotic band (callus) perpendicular to the trabeculae of the bone. The callus usually does not extend completely across the calcaneus and is always anterior to the insertion of the Achilles tendon (Figure 2). There is excellent correlation at this point between the fracture site and the clinical area of point tenderness. Four weeks following the initial roentgen study the fracture site becomes more dense as healing progresses. The band of callus sometimes widens and becomes more shaggy in appearance (Figure 3). Finally, after approximately three months, there is nearly complete healing with little evidence of the previous fracture (Figure 4).

DISCUSSION

Stress fractures, also known as march and fatigue fractures, occur in apparently normal bone in the absence of any definite trauma. They are not new to the military or civilian literature. In 1855 Breithaupt described painful, swollen feet in soldiers after long marches.¹ Although he felt this represented a traumatic inflammatory reaction, it nevertheless is probably the first clinical description of stress fractures. They usually occur in the second, third (most common at Parris Island), and fourth metatarsals, however, we

have encountered them in the femoral neck and shaft, tibial shaft and plateau, the fibula, pubis, calcaneus, and the clavicle. The arm, forearm, wrist, and digits seem to be spared.

The incidence is difficult to calculate since many recruits will withstand pain and swelling, not seeking medical attention. Calcaneal stress fractures did account for approximately 50% of all recruits placed in MRP because of fractures. This is higher than Morris and Blickenstaff's clinical study would indicate with a reported incidence of 26%.² Bilaterality was not uncommon; one of the cases illustrated presented bilateral stress fractures. Another phenomenon was the not uncommon development of a stress fracture in the opposite calcaneus several weeks after the initial fracture was diagnosed. This occurred despite limited weight bearing, no physical activity, and weekly clinical reexamination. Occasionally, a second stress fracture appears in the same bone while the recruit is held in MRP (Figure 5).

The mechanism or etiology of stress fractures, in general, is poorly understood. It is not known why one private develops a stress fracture while another undergoing the same physical activity does not. Some studies indicate that during the first few weeks of heavy activity, weight-bearing bone undergoes some resorption and actually becomes weaker before it becomes stronger.³ This may explain the overwhelming preponderance of calcaneal stress fractures in the first three weeks of training. A common denominator seems to be poor muscle tone which may account for



Figure 1: Initial lateral views of the calcanei showing no evidence of stress fracture

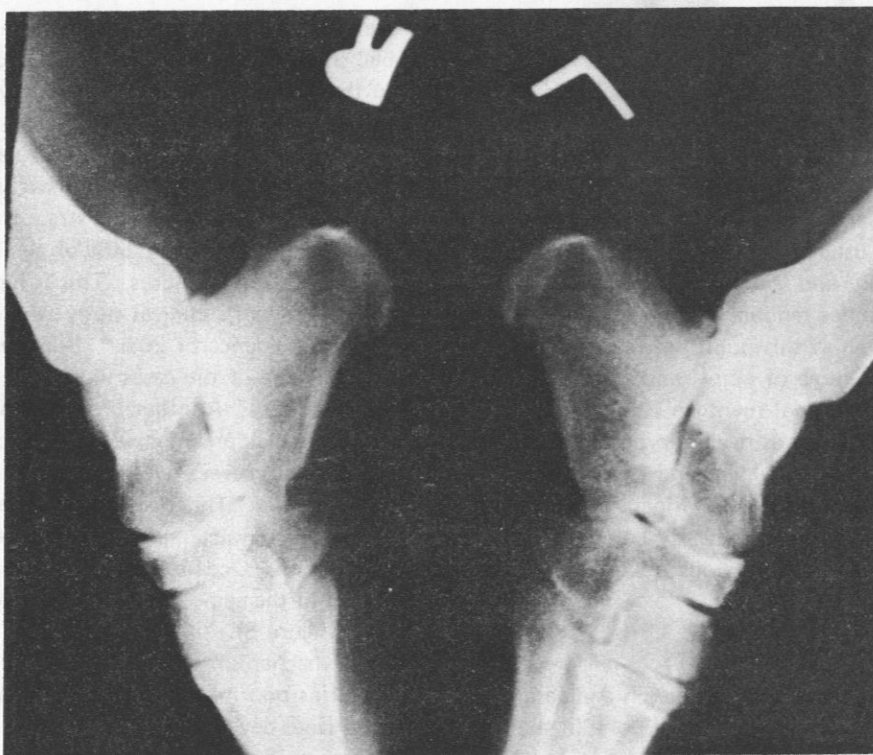


Figure 2: Films obtained two weeks after initial study showing early bilateral stress fractures



Figure 3: Callus formation has now broadened and is shaggy in appearance



Figure 4: Films taken three months after initial study showing complete healing



Figure 5: Double stress fractures of the calcaneus

the appearance of stress fractures in poorly-conditioned, poorly-motivated, and frequently overweight recruits.⁴ These trainees are less apt to put out their best efforts during physical training, thereby stressing the skeletal system because of relaxed musculature. Another feature is recurrent sub-threshold trauma. That is, platoons emphasizing "cadence" (firm digging-in of the heels while marching) tend to have a higher incidence of calcaneal stress fractures.⁴ The leather combat boots offer little protection from calcaneal stress fractures. Bertram⁵ notes, in a personal communication from M. B. Devas, that os calcis stress fractures were eliminated in Royal Marine recruits by avoidance of a very intense form of full knee-bending exercises.

It has also been shown that no consistent abnormality exists in serum calcium, inorganic phosphate, alkaline phosphatase, serum proteins, complete blood count and erythrocyte sedimentation rate.

In 1965 Bassett⁶ described his work on electrical effects in bone suggesting a link between biological activity and stress. The use of direct current may eventually provide a rapid treatment for stress fractures, accelerating the healing process so that recruits may be set back only for one week rather than the usual four to six weeks.

SUMMARY

1. Calcaneal stress fractures occur in presumably normal bone without evidence of direct trauma.
2. Pain is the presenting symptom, with edema second in frequency of occurrence.
3. The initial roentgenogram appearance is usually normal, becoming positive two weeks after the onset

of clinical symptoms, with complete healing at approximately 12 weeks.

4. There are characteristic progressive healing changes noted on serial roentgenograms.
5. Four to six weeks is lost from training.
6. Varied etiologies: poor muscle tone may be the common denominator.
7. Direct electrical current may be the treatment of the future.

Dr. Rosenberg has been released from active duty and his present address is: Richard F. Rosenberg, M.D., Department of Radiology, Montefiore Hospital and Medical Center, 111 East 210th St., Bronx, New York 10467.

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TWO CORPSMEN LAUDED

Two Great Lakes hospital corpsmen saved the life of a North Chicago businessman and were honored for their heroism at a dinner given by the 22nd Street Businessmen's Association. Citations for meritorious service were presented to Hospitalmen James A. Hall and Latimer F. Loftus for aiding Robert Wilkins, who had suffered a heart attack while driving on 30 May.

The two corpsmen used lifesaving techniques they had learned in Hospital Corps School only a few days before the incident.—Chicago, Ill., (NAVNEWS). ☛

Reporting Workload

by Computer

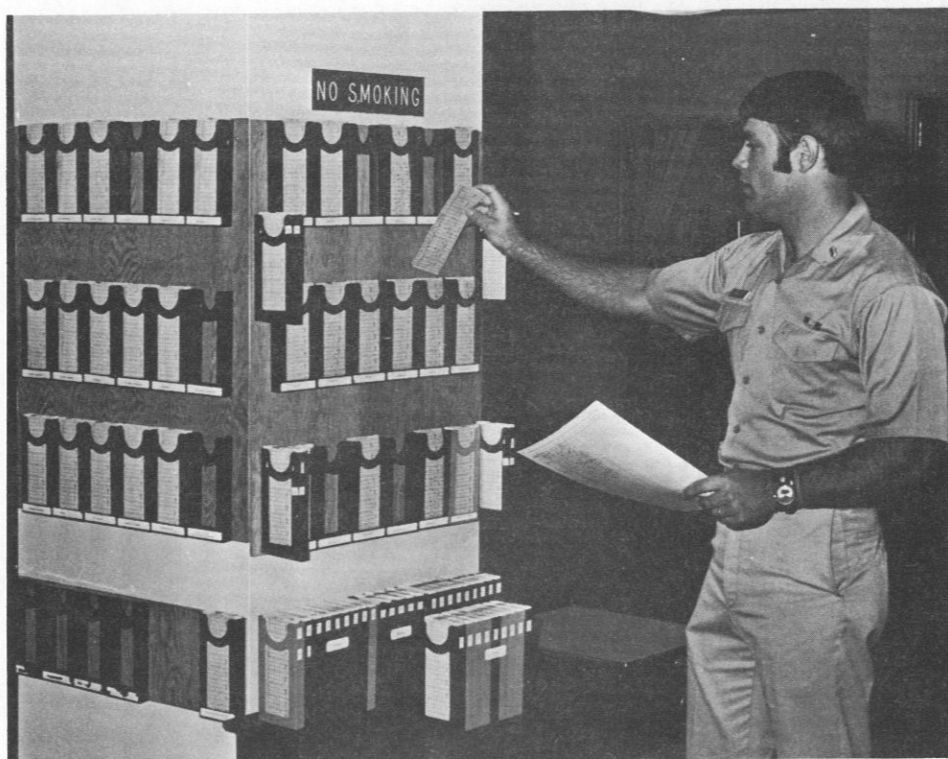
By CDR Jean L. Heath, MSC, USN, Head, Physical Therapy Branch,
and; LT Arnold L. Friedman, MSC, USN, Head, Occupational
Branch; Naval Hospital, Oakland, California.

The Physical Therapy and Occupational Therapy departments at the Naval Hospital, Oakland, Calif., have joined the "computer age." A card system for processing workload data by UNIVAC 1005, the hospital's computer, was designed and implemented in June of 1970. The system utilizes preprinted, pre-punched, ten-minute interval IBM cards to accumulate data relative to admissions, discharges, visits and treatment procedures.

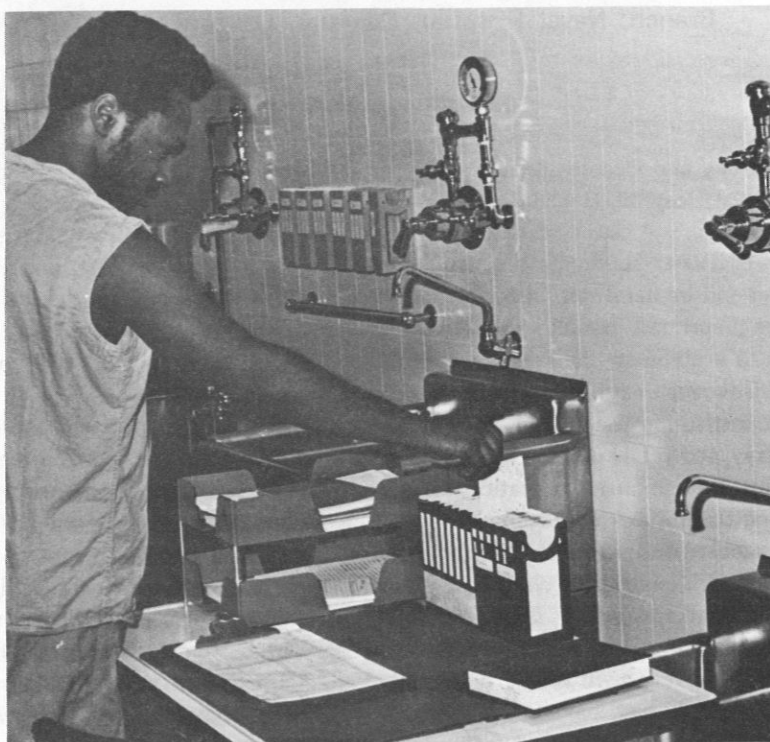
The reasons for instituting the system were threefold: (1) to portray accurately and thoroughly the therapy workloads; (2) to increase operational effectiveness by reducing the number of man-hours required for preparation of reports, and; (3) to devise a universal method of reporting workloads which would be applicable to all therapy departments within the naval establishment, ensuring uniformity and a common basis for comparison. Success in attainment of the first goal, accurate portrayal of workload, has already been achieved by the Physical Therapy Branch. The Occupational Therapy Branch is currently satisfied with its workload information, although it does continue

exploring and experimenting with various types of information. The second goal, that of reduction of man-hours expended in report preparation, has been realized even beyond expectations. It has been determined that more man-hours (an average of 50 hours) were spent in preparation of one monthly report under the old manual system, than are now consumed in the total preparation of one year's reports (approximately 40 hours), using the computerized system. A universal computerized system of reporting therapy workload has not yet been established. However, several therapy departments have adopted the principle of using time intervals as a basis for recording treatment units. A few departments are already utilizing data processing facilities available at their commands, having adopted other card systems. The system established at Naval Hospital, Oakland, could be adopted entirely, or in part, by other therapy departments where computer time can be made available.

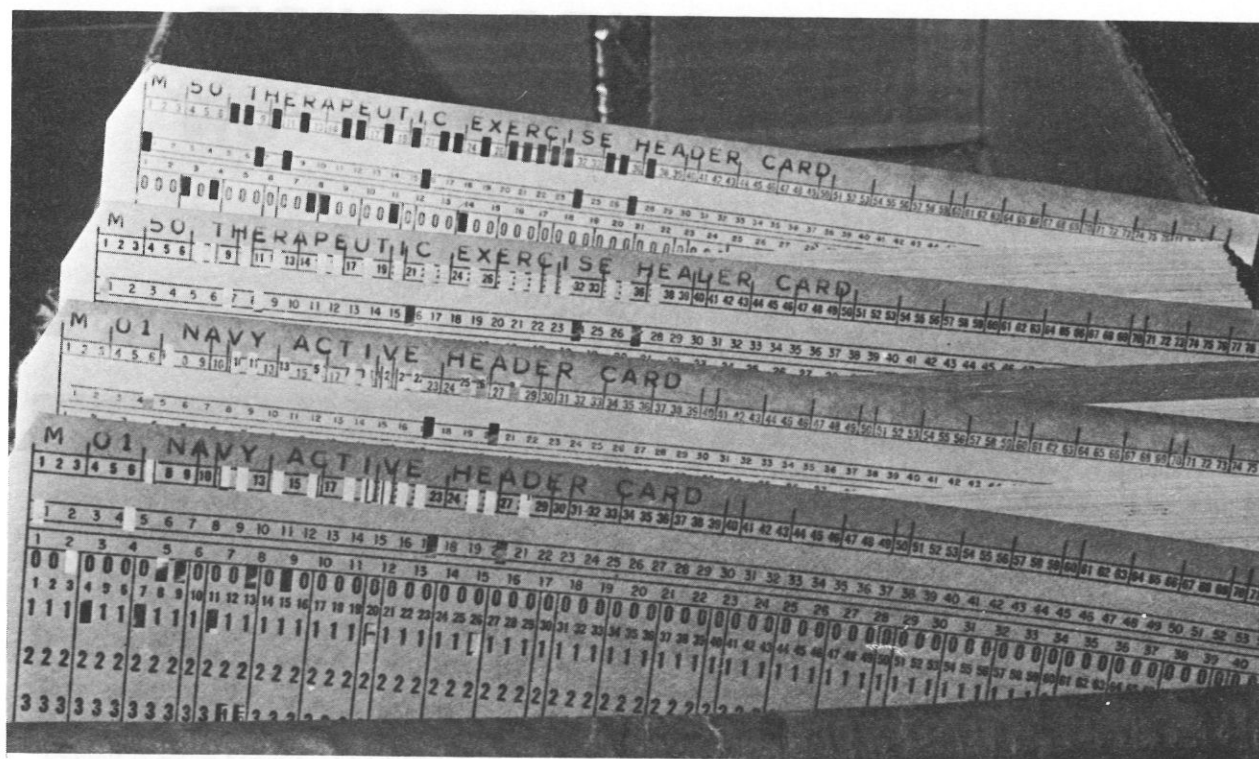
Types of data collected may be varied to accommodate individual departmental requirements. The



Therapist records a patient visit by placing time interval card in appropriate holder. Card decks are placed on the table below for therapists, technicians, general duty corpsmen and students. Card holders for treatment procedures are mounted on the wall to the left.



Hydrotherapy corpsman removes time interval card from appropriate card deck to record a whirlpool treatment. Note the card holders on the desk and on the wall in the background.



Sample "header cards." All visits by Navy active duty personnel are placed between two identical header cards. This system is followed for all other categories including admissions and treatment procedures.

Physical Therapy Branch has gathered workload data* in weekly, monthly, and quarterly reports. These data are used for statistical reports, budgeting, forecasting and evaluation, e.g. justification of equipment based on usage rates, estimation of personnel requirements, analysis of space and equipment utilization, facility expansion, study of trends in types and categories of patients treated, and planning and evaluation of student clinical experience. The Occupational Therapy Branch has utilized the system for preparation of monthly reports, for evaluation of types of patients treated and types of modalities used. Currently, the following data are collected: number of admissions by referring service, number of patient visits by category, and number of patient visits by referring service. The occupational therapy system has been designed in such a manner that data can also be gathered for: the number of patients receiving treatment through the use of the various modalities; the total time spent in these activities,

and; the time spent in preparation and clean-up of materials, which is a time-consuming activity for occupational therapy personnel.

The system at Oakland was designed by CDR Jean L. Heath, MSC, USN. The program was written by DS2 Roger Simpson, USN, who was assigned to the Data Processing Division at Oakland Naval Hospital while in a patient status. LCDR Richard Payton, MSC, USN was Chief of the Data Processing Division at the time the system was established. LT Joseph Steiner, MSC, USN is currently the Chief of the Data Processing Division.

(CDR Jean L. Heath, MSC, USN, received an American Physical Therapy Association Award of Excellence in Practice and Service in the National Division for her scientific exhibit entitled, "A Computerized Method of Reporting Workload." The award was presented at the 49th Annual Conference of The American Physical Therapy Association held in Las Vegas, Nev., 9-16 Jun 1972. The data system for which the award was bestowed had been designed by CDR Heath and implemented at the Naval Hospital Oakland, Calif. The system utilizes preprinted, pre-punched, ten-minute interval cards to accumulate data on admissions, discharges, visits and treatment procedures.)

*Data collected: Number of new patients admitted to Physical Therapy by diagnosis and referring service, number of discharges by referring service, number of in- and out-patient visits by service category, number of individual types of treatments administered by professional and nonprofessional personnel, total time (in hours) spent in treatment for each form of therapy, total time (in hours) spent by the staff both in administration of treatment and in preparation and clean-up.

NEW NAVY NURSES VISIT NAVAL HOSPITAL, BOSTON

By LCDR Norma R. Coyle, NC, USNR,
Naval Hospital Boston, Chelsea, Mass.

The Naval Hospital Boston in Chelsea, Mass., hosted a grand total of 190 Nurse Corps officers during the week of 31 Jul to 4 Aug 1972. Daily groups of young attractive professional nurses, about to embark on careers at naval hospitals throughout the U.S., made the transition from the classroom at Women Officers' Candidate School (WOCS), Newport, R.I., to the wards of the naval hospital in Boston with ease and confidence.

Assisting the nurses in their adjustment to participation in patient care within the Navy, the program effectively acquainted the talented neophytes with the rewarding facets of naval professional life, emphasizing patient care and leadership. The group was prepared and fortified for their approaching debut as functioning members of the Navy medical team, by a pleasurable interaction with interested staff and patients at the naval hospital in Boston.

In addition to the opportunity for contact with patients, the 190 Nurse Corps officers took part in physician and nursing rounds, as well as the reviewing of patient clinical records. They toured various representative hospital departments such as intensive



Retired Warrant Officer Pemberton tells sea stories to Ensigns Clayburn and Smith.



The new Navy nurses were welcomed to Naval Hospital Boston by CAPT Conder, NC, USN (standing in front row, third from the left), and her staff in the main lecture room.



LCDR Mary Piasta (seated), Charge Nurse of the Sick Officers' Quarters, explains a patient care plan for nursing action to eager onlookers.

care areas, pediatric clinic, the nursery and selected wards. Provisions were also made for attendance at patient care conferences conducted by staff physicians. The visit concluded with a tour of the USS CONSTITUTION.

Both WOCS and Naval Hospital, Boston, coordinated efforts to provide the new Navy nurses with a preview of their forthcoming assignments.

The accompanying photographs convey the reassuring impression that the Navy medical family is not just growing older. It's growing better and more effectively, in many ways.



LCDR Mary Piasta (center) explains to the group the importance of a patient's clinical record.



LTJG Claudia Ludwig (left) holds a Pediatric Patient Care Conference at the bedside of a 3-month-old baby.



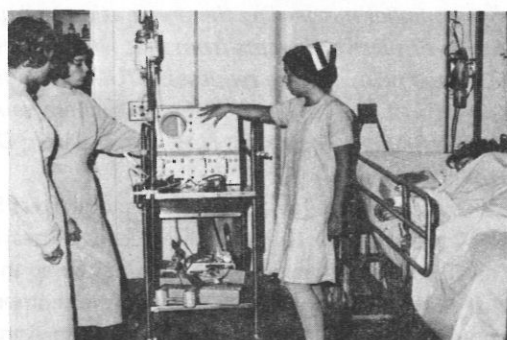
The team concept: patient, doctor, nurse, corpsman.



A bedside medical conference in progress.



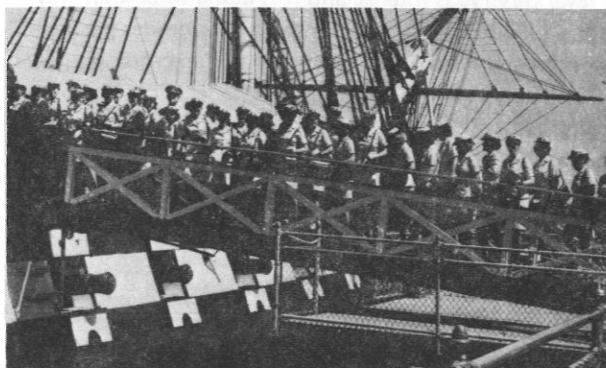
LTJG Terry Hamer, Charge Nurse of Orthopedics, demonstrates teaching patient care for a special pillow-type leg splint.



LTJG Marsha Mihailoff (right) explains the use of a cardiac monitor used in the intensive care unit.



From the wards of Naval Hospital, Boston to the USS CONSTITUTION, before returning to Newport.



About to set foot aboard the USS CONSTITUTION — a ship of national heritage and naval tradition — is the visiting contingent of new Navy nurses.



NAVAL RESERVE ANNUAL QUALIFICATIONS QUESTIONNAIRES (AQQ's)

The fall of each year is the time for reservists to submit their Annual Qualifications Questionnaires (AQQ's). Medical Department reserve officers often do not give this document the attention it deserves. The NAVAL RESERVE ASSOCIATION publishes an excellent information bulletin regarding the preparation and uses of the AQQ. Extensive excerpts from that NRA bulletin are reprinted below, at the request of BUMED Code 36, and through the courtesy of the Naval Reserve Association (NRA), 1913 Eye St., N.W.; Washington, D.C. 20006.

"During the last few years, the Headquarters Staff of NRA has carefully reviewed the records of nearly 3,000 Naval Reserve officers. Out of this has come the realization that too many officers do not either comprehend or appreciate the advantages of submitting an Annual Qualifications Questionnaire at least once a year . . ."

"The competition for promotion and retention in the Naval Reserve is intense and it is going to be that way for a long time to come. In the higher grades particularly, many records are examined and exceedingly few are chosen . . . "There are definite legal ceilings on the number of Reserve officers the Navy can retain in each grade and designator. This situation forces the Navy to a systematic selection of the best qualified. But who are the best qualified? This question poses a difficult problem for every Selection Board.

"In making decisions the members of the Board rely upon two essentially different records. One is the fitness report and the other is the AQQ. The fitness report is prepared by someone other than yourself and it is intended to evaluate only your *military* activities and accomplishments. Viewed in terms of Naval Reserve

performance, the hundreds of fitness reports examined by a Board present an amazing and somehow discouraging similarity. They do not and cannot present any wide range of variation in duty assignments, training experience or evaluation of performance of duty. Few officers fall above or below the large gray area of 'above average'. The members of the Board, therefore, seek a way to make each record more fully represent the individual officer and the whole man for which it speaks. They search for additional evidence of leadership and capacity for greater responsibility. These two characteristics are much the same no matter where they are exercised, and the inactive duty Naval Reserve officer is as likely to demonstrate them in civilian life as he is in military life. It is not unnatural that the members of a Board want to know more about each officer's civilian activities and accomplishments.

"After all, your civilian activities do represent the larger area for you to exercise leadership and responsibility. If you drill four hours a week and perform two weeks ACDUTRA, your Naval Reserve activities take only about 12% of your awake hours each year. This, you will agree, is too small a proportion on which to make an extensive judgment, and the circumstances of those few hours do not always provide an opportunity for adequate evaluation. The Navy does not make its own evaluation of you as a civilian. Your Commanding Officer should properly confine his remarks strictly to what you do or do not do under his command. *It is up to you*, therefore, to put your civilian achievements on record, in your own way, in your own words--if you want a Selection Board to have a complete picture of your capabilities.

"The place to do this is on the AQQ . . ."

"Here are some important facts you should keep in mind:

1. An Annual Qualification Questionnaire *is required -- it is not optional* -- from every Naval Reserve officer on inactive duty, unless on the Inactive Status List of the Standby Reserve or retired. Members of Selection Boards consider the failure to submit an AQQ annually as a failure to reply to, or comply with, official directives.

2. In addition to annual submission, a revised AQQ can and should be submitted whenever there is any significant change in the data shown on the last AQQ.

3. For annual submission, AQQ forms are distributed directly to each officer's home address in September by the Naval Reserve Manpower Center. Every effort is made to avoid leaving anyone out. It is essential that any changes to your address be reported promptly.

4. However, the final responsibility for obtaining, preparing and submitting an AQQ once a year lies with the individual officer. If you have not received an AQQ form by October 1st of each year, you should request one from the Naval Reserve Manpower Center, Officer Classification Branch, Bainbridge, Maryland 21905. Telephone: Area Code 301 378-2121, Extension 858.

5. Your record should contain an unbroken series of submitted AQQ's just as it should contain an unbroken series of fitness reports. It is not enough, and it may be harmfully revealing, to have submitted only a single AQQ just prior to the examination of your record by a Selection Board. You may submit AQQ's for past years which have been missed, but be certain that each AQQ is chronologically correct.

6. The AQQ preferably should be typewritten, and it must be signed and dated on all copies.

7. You may 'extend your remarks' by using separate additional sheets, and you are encouraged to do so. Because all copies of your questionnaire are read and examined by their respective users, it is important that three copies of each supplemental sheet be provided. Be sure your file number appears on each sheet."

"There is no excuse for not telling a full, well-rounded story of yourself as a civilian. Be meticulous about identifying each extended entry with the exact number of the item on the form. If you answer any item entirely on a separate sheet, be sure to make an appropriate entry in the proper space on the form; e.g., 'See attached sheet'. Do not be any more 'wordy' than is absolutely necessary to be thorough!"

8. "All blank items must be completed even though a change has not occurred in the information previously reported. Yes -- this is a lot of work, but then remember the competition is tough . . ."

9. "The preprinted information in your AQQ was obtained from magnetic tape records at the Naval Reserve Manpower Center, and it represents the latest information the Navy has about you. It eliminates the need for you to make repetitive entries of the same basic information year after year. Should *any* preprinted entry (except address) be incorrect, indicate the correct information plainly by typewriter or ball-point pen right on the form. If your address is incorrect as printed and you are participating in a reserve training program, report your new address to your unit for submission via the RUPPERT. If you are not a driller your service record is held at the Naval Reserve Manpower Center, and you can correct your address simply by completing and returning the card accompanying your questionnaire . . ."

"You will find it helpful to refer to the printed instructions frequently as you proceed to fill out your AQQ, and also to refer to the following comments which refer to specific items."

"ITEM 11 - ACTIVE MILITARY SERVICE

Active duty only; DO NOT INCLUDE ACDUTRA HERE. A new block asks if you were recalled or extended for Southeast Asia in 1968 -- this applies to those officers involuntarily extended or recalled, not to those who were on a normal tour of duty in Southeast Asia at that time. The latter type of service should be reported as 'Other Active Duty'."

"ITEM 14 - CIVILIAN EMPLOYMENT

Be as explicit as you can. While only a short description of your duties is asked for, being too brief can adversely indicate an apathetic attitude on your part. Worse still, too little explanation can be inconclusive for members of the Board. It is to your advantage to 'extend your remarks' but be wholly objective, not editorial.

"DO NOT ENCLOSE A CIVILIAN-TYPE RESUME OR A FORMAL JOB OR POSITION DESCRIPTION! If it is possible to do so without distortion, emphasize those aspects of your employment (or self-employment) which may be related to comparable things you could do in the Navy if recalled to active duty. A wide range of capabilities or knowledge always enhances your usefulness as an officer . . ."

"ITEM 15 - CIVIC RESPONSIBILITIES, COMMUNITY ACTIVITIES

Don't be bashful! Here is the place clearly to show who and what you are. It may make a difference, setting you apart from the 'average' by showing your assumption of responsibility, instinct for leadership and record of achievement, even though the activities you

cite are in no other way related to the Navy. You should consider, for example:

(a) *Any office* to which you have been elected or appointed in any civic or political organization, service club (Rotary, Kiwanis, Lions), fraternal order, trade association, and so forth.

(b) *Participation* in such organizations, or in professional, church, social, community, school or recreational activities -- and there may be others.

(c) *Citations, awards or worthy recognition* received for any activity. It is not necessary to submit proof! CLIPPINGS, LETTERS AND PHOTOGRAPHS CONCERNING CIVILIAN ACTIVITIES WILL NOT BE MADE A PART OF YOUR OFFICIAL RECORD AND, therefore, will not be seen by your Selection Board.

(d) *Article, paper or book you have written.* Do not submit a copy of it; merely cite the title and when and where it was published. Speaking engagements of significance should be mentioned.

(e) *Civic responsibilities*, such as civil defense, reserve police or rescue squad; or political offices held; or membership on a council, board or study group. Do not overlook mention of any worthwhile results achieved due to your contribution.

(f) *Hobbies*, particularly if it is something that could be related to naval activities -- and there are many of them."

"ITEM 19 - ACDUTRA DURING PAST FISCAL YEAR

Generally speaking, the nature of your active duty for training will already be revealed in your record by orders, fitness reports or copies of certificates. It may be to your advantage, however, to expand upon this often meager information by highlighting any exceptional feature of your ACDUTRA which will serve to illustrate that you have gained or renewed a specific Navy-useful skill or knowledge, or have demonstrated a capacity for leadership and additional responsibility"

"All of this may help you to understand what it is that the Navy wants to obtain from the AQQs you submit, and why the submission of this kind of information is important to you personally. In effect, a series of AQQs is a running resume of your civilian career at work, in the community and at home. If you wish, it can speak for you to a Selection Board exactly as though you were there in person"

NAVAL RESERVE MEDICAL DEPT. (INACTIVE) SELECTION BOARDS

Fiscal Year 1973 Inactive Naval Reserve Selection Boards have been scheduled to convene as follows:

Selection for:

Date:

RADM, MC	3 January 1973
CAPT, MC, MSC, NC	27 February 1973
CDR, MC, MSC, NC	27 February 1973
WO, MSW	15 May 1973
LCDR, MC, MSC, NC	22 May 1973
LT, MSC, NC	22 May 1973

Naval District Commandants have been requested to nominate qualified Ready-Reservists for consideration as board members. It is anticipated that the services of approximately 20 Medical, Medical Service and Nurse Corps Captains and Commanders will be required for duty as board members. The Commandants' nominations will be screened at several levels, including the Bureau of Medicine and Surgery before final review and approval by the Secretary of the Navy.

The selection of board members is extremely important. The boards are invariably composed of the best talent available and are selected with an eye toward both wide experience and diversity of background. Those individuals who are contacted by the Naval Districts in regard to this duty, and who feel they meet criteria for membership, are encouraged to give very serious consideration to the opportunity to serve.—BUMED, Code 36.

PHYSICIAN ASSISTANT SCHOOL INSTRUCTOR NEEDED

There will be an opening 1 Feb 1973 for a naval medical officer at the USAF-USN Physician Assistant School at Sheppard AFB in Wichita Falls, Tex. The position entails a combination of clinical and academic medicine and educational research. Part of the medical officer's time is spent teaching students on an individual basis in the clinics at the large modern hospital at Sheppard AFB. The instructor will also be preparing and giving lectures and will be using many new methods in teaching. These include video-tape lessons, learning center, audio-programmed texts, and computer-assisted study.

The program is closely affiliated with three major universities and results in a baccalaureate degree.

Further information can be obtained by contacting the Chief, Bureau of Medicine and Surgery (Attention: Code 317), Navy Department, Washington, D.C. 20390.

HISTORICAL FUND

Response to the invitation for Medical Department personnel (active and inactive) to make voluntary

contributions to the NAVY MEDICAL DEPARTMENT HISTORICAL FUND has been disappointing (see U.S. Navy Medicine 60:39, July 1972). The Fund was created to acquire and maintain items of historical significance to the Medical Department, including portraits designed to perpetuate the memory of its distinguished members.

The Committee established by the Surgeon General to administer the Fund consists of the following members:

RADM Harry S. Etter, MC, USN, Chairman
RADM Alene B. Duerk, NC, USN
CAPT James T. Ashwell, DC, USN
CAPT Emmett L. Van Landingham, Jr., MSC, USN
Mr. Thomas J. Hickey (BUMED Comptroller),
Secretary-Treasurer.

This Committee invites and encourages Medical Department personnel who have not already done so to make voluntary contributions to support the mission of the FUND. Your check or money order (payable to "Navy Medical Department Historical Fund") may be mailed to Treasurer, N.M.D. Historical Fund, Bureau of Medicine and Surgery (Code 46), Department of the Navy, Washington, D.C. 20390. 📧

ACUTE POISONING—ANTIDOTE CHART

The chart entitled "Emergency Medical Treatment for Acute Pesticide Poisoning," has been revised by the U.S. Navy Disease Vector Ecology and Control Center, Naval Air Station, Jacksonville, Fla. 32212. Modes of action, toxicity, symptoms and treatment for poisoning by insecticides, rodenticides, herbicides, and solvents are presented. The chart is a convenient size to be posted in emergency treatment rooms and in other locations where it would be advantageous to have the information available for quick reference.

Copies will be distributed to the naval hospitals, dispensaries, and all ships and stations having Medical Department personnel assigned. Other activities desiring the chart should submit a written request directly to the Officer-in-Charge of the Disease Vector Control Center. —BUMED, Code 72. 📧

AIDS TO VD CONTROL

Two new venereal disease films suitable for use in general and predeployment briefings are in the works, under Navy sponsorship.

There is also a film version of an award-winning television documentary sponsored by Pfizer Laboratories

Division of Pfizer Inc. The film is suitable for general audiences and may be obtained on a no-charge basis by contacting your local Pfizer Laboratories' representative, or writing to: Pfizer Laboratories, Inc.; 235 East 42nd Street, New York, N.Y. 10017 — Department Plague.

"VD: A Plague on Our House,"

16 mm, color, 34 minutes.

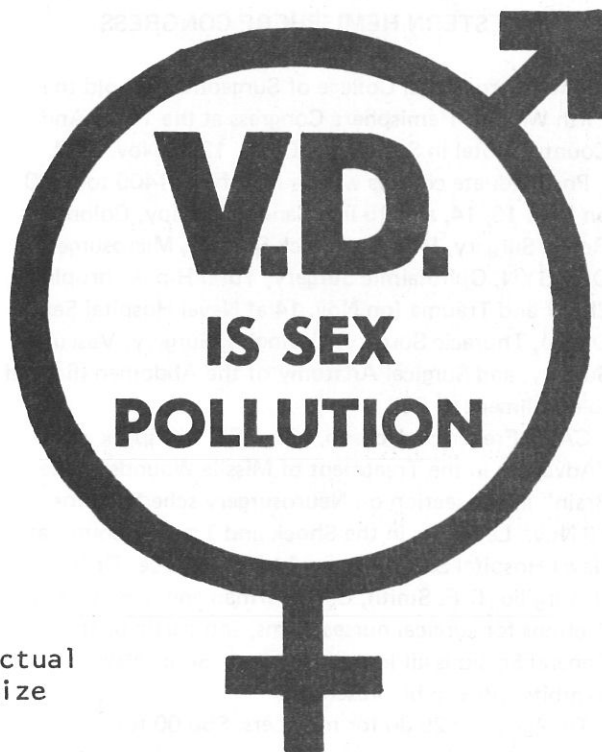
"Gonorrhea and syphilis attack and maim over two million people in one year in the U.S. Venereal disease is a publicly unrecognized plague.

"This report points out that ignorance and fear of social stigma often prevent the affected from seeking treatment, although treatment is sure and nearly painless."—Media Department Head, Naval Medical Training Institute, NNMCI, Bethesda, Md.

We can't help pointing out another available aid to publicizing the importance of VD control. This tip comes from the PACIFIC HEALTH BULLETIN No. 44 of Aug 1972, an up and coming publication of Navy Environmental and Preventive Medicine Unit No. 6; Box 112, FPO San Francisco 96610. We have reproduced the irresistible notice below:

VD STICKER

Shown below is a VD sticker that is now available from EPMU-6. Red and black in color with a self-sticking back, it is ideal for mirrors, etc. State quantity.



Actual
Size

(To Editor Jenkins, LCDR, MSC, USN, please put me down for order of one VD sticker. Like your pub.) 🍷

HEARING LOSS AND FECA

The Department of Labor Office of Federal Employees' Compensation is frequently presented with claims for compensation due to hearing loss resulting from loud noise encountered by Federal employees at work. In order to properly adjudicate such claims under the provisions of the Federal Employees' Compensation Act (FECA), the record must contain documentation showing whether or not there is any noise exposure at levels above 85 decibels.

Federal agencies are now maintaining records of environmental noise levels at and above 90 decibels, as required by the William-Steiger Occupational Safety and Health Act. In a recent letter promulgated by the Office of Federal Employees' Compensation, the necessity for keeping records of noise level readings above 85 decibels has been pointed out, to satisfy the requirements of cases arising under the FECA.

Interested parties are urged to take notice and assist in this matter.—BUMED, Code 7311. 🍷

WESTERN HEMISPHERE CONGRESS

The International College of Surgeons will hold the Fifth Western Hemisphere Congress at the Town And Country Hotel in San Diego, Calif., 12-16 Nov 1972.

Postgraduate courses will be held from 1400 to 1700 on Nov. 13, 14, and 15 in: Cancer Therapy, Colon and Rectal Surgery, Head and Neck Surgery, Microsurgery, OBS-GYN, Ophthalmic Surgery, Total Hip Arthroplasty, Shock and Trauma (on Nov. 14 at Naval Hospital San Diego), Thoracic Surgery, Urological Surgery, Vascular Surgery, and Surgical Anatomy of the Abdomen (limited to enrollment of 25).

CAPT Frederick Jackson, MC, USN will speak on "Advances in the Treatment of Missile Wounds of the Brain" in the section on Neurosurgery scheduled for 16 Nov. Lecturers in the Shock and Trauma Course at Naval Hospital San Diego on 14 Nov include: Dr.'s R. Virgilio, D.E. Smith, C.M. Herman and C.R. Valeri. Sections for surgical nurses, films, and participants in General Sessions all look impressive. Some Navy exhibits will also be presented.

To register (\$25.00 for members, \$50.00 for non-members) in advance and reserve places for courses,

luncheons and breakfast meetings, Contact: International College of Surgeons, c/o Fifth Western Hemisphere Congress, 1516 North Lake Shore Drive, Chicago, Illinois 60610. 🍷

MACKLIN MEMORIAL LECTURE SERIES

The Department of Gynecology at the Naval Hospital, Portsmouth, Va. is sponsoring the hospital's Seventh Annual Macklin Memorial Lecture Series on 17 Nov 1972. This year's subject is "Chemotherapy of Malignant Disease."

Additional information can be obtained from: CAPT R. T. Upton, MC, USN; Chief of Gynecology Service, Naval Hospital, Portsmouth, Va. 23708. 🍷

MEDICAL—SURGICAL CONFERENCE

On 15-17 Jan 1973, the Second Biannual Commander-in-Chief, U.S. Pacific Fleet and University of Hawaii School of Medicine Medical - Surgical Conference will take place at Pearl Harbor, Hawaii. The subject will be "Infectious Diseases." There is no charge for this meeting which is open to all military and civilian physicians, and medical students. (See U.S. NAV MED 60(3):11, Sept 1972.)

For further information contact: LT Harris S. Vernick, MC, USNR, Coordinator, Commander-in-Chief, U.S. Pacific Fleet and University of Hawaii School of Medicine Medical-Surgical Conference; Medical Department, Naval Air Station, FPO San Francisco 96611. 🍷

MEDICAL SEMINAR IN BAHRAIN

The first Medical Seminar in Bahrain, B.I., was successfully concluded 13 Sept 1972. The seminar was conceived and planned by the State of Bahrain Minister of Health, His Excellency Dr. E. Ali Fakhro, in conjunction with the staff of the U.S. Navy's Middle East Force, commanded by RADM M.G. Bayne and homeported in Bahrain.

Two Navy physicians traveled from the U.S. to Bahrain to conduct the seminar: CAPT James W. Lea, MC, USNR, Chief of Medicine at Naval Hospital Portsmouth, Va., and; CDR Robert C. Cefalo, MC, USN, a specialist in OB/GYN.

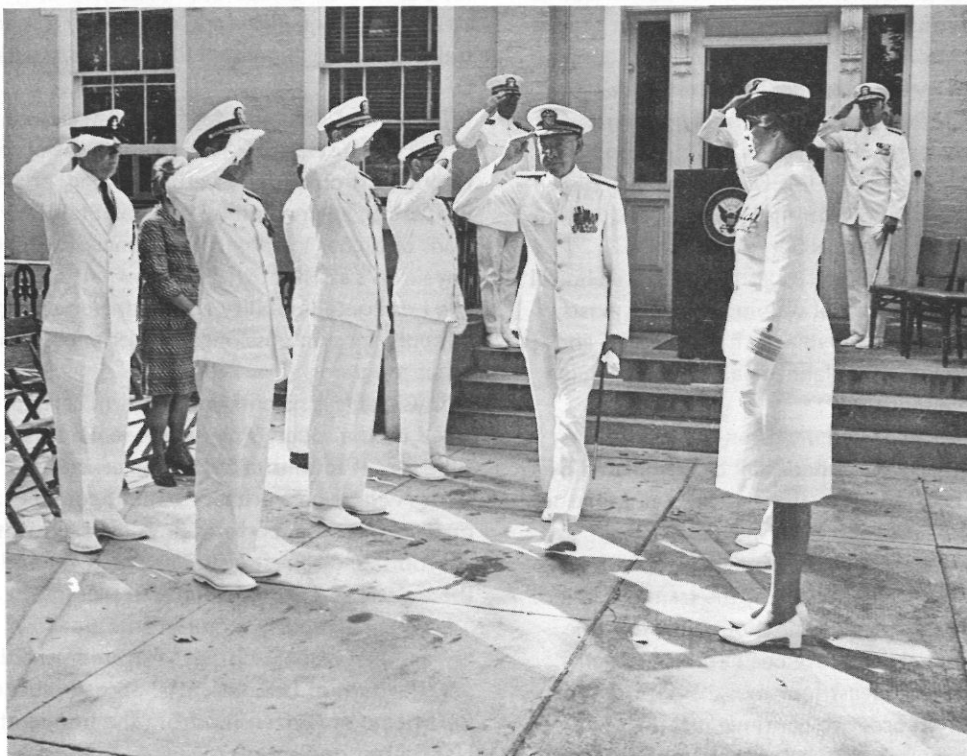
The opening ceremony at the Manama Municipal Hall

on 11 Sept was attended by cabinet ministers, members of the Diplomatic Corps and local dignitaries. Dr. Fakhro expressed his appreciation to the U.S. Navy for providing the guest speakers and voiced the hope that future conferences of this nature would be held in Bahrain. He emphasized the importance of a continuing learning process for all members of the medical profession.

During the three-day seminar, CAPT Lea and CDR Cefalo presided over nine hours of presentation and discussion of a variety of medical topics, including endocrine disorders and diabetes in pregnancy. The

U.S. Navy physicians also spent one morning making rounds at government hospitals. Seminar sessions were scheduled from 1600 to 1900 daily in order to allow maximum attendance by doctors, nurses and medical administrators in Bahrain.

Arrangements for this seminar were initiated by LT W.B. Profilet, MC, USNR, now on the staff of Nav Hosp Bethesda, NNMCMC, Bethesda, Md.; and completed by LT Joseph Breslin, MC, USNR, and LT K.E. Hippensteel, MC, USNR, now assigned to duty with COMIDEASTFOR. 🇺🇸



CAN ANYONE TOP THIS? ———

RADM Frank T. Norris, MC, USN passes through six Flag Officer Side Boys during retirement ceremonies conducted 31 Aug 1972 at BUMED in Washington, D.C. Standing in the right foreground is RADM Alene Duerk, Director of the Navy Nurse Corps, the Navy's first lady admiral.—PAO, BUMED, Washington, D.C.

RADM NORRIS HONORED

In an historic ceremony during which RADM Frank T. Norris, MC, USN passed through six Flag Officer Side Boys, a distinguished naval career ended in retirement on 31 Aug 1972 at the Bureau of Medicine and Surgery, Washington, D.C.

Among RADM Norris' impressive duty assignments are included: duty with the First Marine Division during World War II, where he received the Purple Heart for wounds suffered in action at Guadalcanal; command of the Naval Hospital at Camp Lejeune, N.C.; and several tours of duty at BUMED.

In addition to the Purple Heart and numerous campaign and service awards, RADM Norris holds the Legion of Merit awarded to him for exceptionally meritorious service as Assistant Chief of the Bureau for Personnel and Professional Operations, and the Meritorious Service Medal for his performance as Inspector General, Medical, during the final year of his career.

RADM Norris obtained his medical education at Wake Forest and Temple University Schools of Medicine, and is a Diplomate of the American Board of Internal Medicine.—PAO, BUMED, Washington, D.C. 🇺🇸

OFFICIAL INSTRUCTIONS AND DIRECTIVES

BUMEDINST 1510.10C of 3 Aug 72

Subj: Training of hospital corpsmen

Formal training programs for medical technicians are designed to provide the best qualified support personnel available. Training quotas are established annually and represent the number of students required to staff authorized billets at 100 percent. On-the-job training in specialties for which a formal program exists reduces the pool of general service personnel to meet other authorized requirements and results in improper management of rotation policy and also results in the forced misassignment of technicians to meet operational requirements.

BUMEDINST 1500.9 series lists formal training courses for hospital corpsmen. Requests for training should be submitted to BUPERS via BUMED. Personnel volunteering for duty with the FMF may do so by requesting assignment to a Field Medical Service School.

On-the-job training will not be authorized in technical specialties for which a formal training program exists, unless a vacant billet is available in that specialty, and there is no indication of a planned gain of a technician over the next five months.

All personnel to be placed under on-the-job training for which an NEC is established shall be nominated by letter to BUMED prior to starting the course of instruction. The nomination letter shall include the full name and service identification of the nominee, type of training to be accomplished and dates of the training period. Nominees for on-the-job training should normally be made from personnel who have been on board their present duty station at least four months but not more than six months. In order to continue meeting the general service hospital corpsman requirements of the Operating Forces and Fleet Marine Force, projected rotation dates will not be adjusted nor extended for on-the-job training. Personnel desiring on-the-job training shall be counseled as to the provisions of this instruction and be advised that completion of such training will not usually satisfy the requirements for recognition or granting of credit by civilian associations or institutions of higher learning.

BUPERSNOTE 1120 of 30 Aug 72

Subj: Navy Physician's Assistant Warrant Officer Program; application for and administration of

This notice outlines the eligibility requirements and procedures whereby hospital corpsmen of the Regular

Navy, Naval Reserve on active duty, and TAR Program may apply for the Navy Physician's Assistant Training Program, and ultimately seek appointment to warrant status via the Warrant Officer Program.

The program will be conducted in two phases: (1) 12 months' didactic training (DUINS) at either The George Washington University, Wash., D.C., or the U.S. Air Force, School of Health Care Science, Sheppard Technical Training Center, Sheppard AFB, Wichita Falls, Tex.; (2) a 24-month clinical apprenticeship at a naval hospital after which, if qualified and selected by a board of officers, trainees will be appointed Physician's Assistant Warrant Officer.

The educational goal for physician's assistants is a baccalaureate degree. This goal may be accomplished through off-duty study before, during, or after the training period, augmented by credits obtained from institutions of higher learning. This concept will provide the physician's assistant with a career lattice having vertical and horizontal mobility permitting deserving personnel to apply for commissioned officer appointment through other programs.

Physician's assistants will perform certain tasks delegated by the supervising physician who remains responsible for all actions taken by the assistant. Principal duties will involve primary patient contact to obtain medical histories, perform physical examinations, order appropriate diagnostic studies, interpret and record these data, and prescribe limited therapy.

Program eligibility requirements are:

- a. Must be U.S. citizen. Naturalized citizens and persons born of U.S. parent(s) abroad must obtain a Certificate of Citizenship from the Immigration and Naturalization Service.
- b. Test scores: GCT-55; ARI-55.
- c. Willingness to obligate for 54 months' service from date of commencing training.
- d. High school graduate.
- e. Pay grade E-5, or above, with years of active service time as follows:

Pay Grades	Minimum	Maximum
E-5	4	6
E-6	6	10
E-7	8	12
E-8	11	14
E-9	13	16

- f. Present evidence through an interview process that the high standards of character, patriotism, sense of duty, personal conduct, and financial responsibility required of

a prospective officer are possessed by the applicant.

g. In addition to the above, meet those other general eligibility requirements for the Warrant Officer Programs as delineated in BUPERSMAN 1020310, less exceptions outlined later in this notice.

Only waivers of age and of time in service may be requested. Consideration of waivers will be based on the competitive selection process established by the formal selection board process for the review of all applications.

Applications for warrant status shall be submitted during the second year of apprenticeship. Personnel failing selection to warrant officer for two consecutive times will be dropped from the program and reverted to general service hospital corpsman. In view of the extensive training programs and selection criteria for physician's assistant, the requirement to take the Officer Selection Battery Examination is waived.

Letters of application are to be submitted to BUMED after 1 Jan but not later than 1 Mar. Application preparation is a joint responsibility of the command and the applicant. Applications received without the required high school and college transcripts will not be considered by the selection board and will be returned.

The commanding officer or unit commander will appoint a board of three officers of whom one will be a Medical Corps officer, when possible, who will interview each applicant. The commanding officer's endorsement will certify the information contained in the applicant's request. It shall contain a concise analysis of all the applicant's observed traits and any additional information considered pertinent for consideration by the selection board.

Applications of all fully-qualified candidates will be evaluated by a BUMED selection board convened annually during Mar. The results of the board will be promulgated by individual letters of selection and non-selection.

Selectees will be issued BUPERS PCS orders to activities designated by BUMED for both phases of the training program. Orders will place trainees under the military and administrative control of the Commanding Officer, Naval Medical Training Institute, NNMC, Bethesda, Md.

BUMEDNOTE 6100 of 24 Aug 72

Subj: Medical Boards

Since the new medical board system was implemented on 1 Jan 72, this Bureau has noted several recurring errors in the preparation and submission of medical board reports. The errors and applicable references are cited below to assist convening authorities.

Submission of original medical board reports for departmental review (MANMED Art. 18-23). The original is to be filed in member's Health Record, except in cases where disposition is referred to the Central Physical Evaluation Board.

Failure to adequately describe the extent of functional impairment associated with the diagnoses (MANMED Art. 18-10 and 18-22). The determining criterion for retention on active duty is the ability of a member to reasonably fulfill the purpose of his employment.

Failure to submit rebutted medical board reports for departmental review (MANMED Art. 18-24, Item No. 21). In all cases wherein a member submits a statement in rebuttal to the findings and recommendations of the board, the board's report, with the statement in rebuttal, and a statement in surrebuttal must be submitted for departmental review.

Inappropriate medical board recommendations of which the following are examples:

1. Recommendation for "Discharge, Unsuitable for Service" when the member has a physical disability, and recommendation for "Discharge, Physical Disability" when the member is unsuitable for service by reason of a personality disorder. (BUMEDINST 1910.2F [NOTAL], para. 4 and 5).

2. Recommendations for "Discharge, Convenience of the Government" with subsequent local action separation. BUMEDINST 1910.2F (NOTAL) (para. 8), clearly requires submission for departmental review and approval before a member can be separated by reason of Convenience of the Government.

3. Recommendations for "Discharge, Physical Disability" and/or "Refer to Central Physical Evaluation Board" when the member meets the standards for initial entry. Inappropriate recommendations of this type are primarily associated with hearing losses and defective visual acuity. BUMEDINSTS 6320.41A and 6260.6B and MARCORPS ORDER 6260.1A provide further guidance regarding the appropriate disposition of members with hearing losses.

Failure to submit copy of previous medical board reports with current medical board reports (MANMED Art. 18-24, Item 21(2)(e)). Those reports submitted for departmental review, making reference to a previous medical board report must be accompanied by a copy of the previous report.

Failure to submit SF-88 on Class 1 and 2 aviation personnel for departmental review [MANMED Art. 18-12(4) and 15-73(2); BUPERS Manual 1810520.14a]. In all cases wherein Class 1 or 2 aviation personnel appear before a medical board that recommends return to full duty or limited duty, an appropriate aviation physical examination shall be conducted.

Inconsistencies between information contained on the Medical Board Report Cover Sheet, the narrative portion of the report, and the NAVMED 6100/2. It is important that the findings, recommendations, and other information contained in the various parts of a medical board report be consistent; numerous discrepancies have been noted (a forthcoming change to MANMED will elaborate).

In addition to MANMED Chap. 18, and those references referred to above, the following references provide additional guidance and should be made available to all medical department personnel involved in the conduct, preparation, review and submission of medical reports:

SECNAVINST 1850.3B (NOTAL): Uniform Interpretation of Laws Relating to Separation from the Military Departments by Reason of Physical Disability.

BUMEDINST 1910.2F/BUPERSINST 1910.23 (NOTAL): Disposition of Enlisted and Inducted Members by Medical Board Action by Reason of Physical Disability,

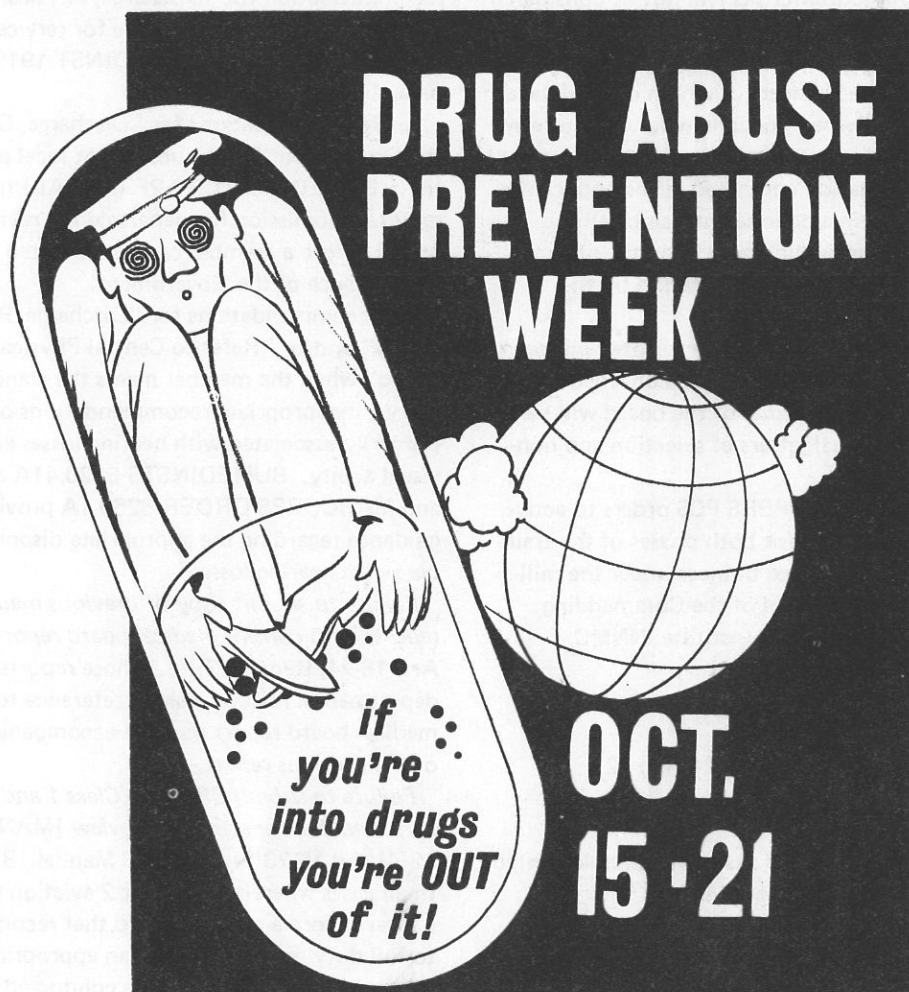
Military Unsuitability, and Enlisted or Inducted in Error. BUMEDINST 6120.6D and MANMED Art 15-48: Physical Examination Prior to Separation from Active Duty.

BUMEDINST 6320.41A: Aural Rehabilitation.

PQ & MR NOTES (Revised 1/72): Provides guidance for the conducting of medical boards and the appropriate disposition of members with selected diagnoses. Additional copies are available to medical board-writing facilities on request to BUMED (Code 33).

Physician's Guide -- Disability Evaluation Examinations, June 1963. Published by the Dept. of Medicine and Surgery, VA, Wash., D.C., and available in limited quantities upon request to BUMED (Code 33).

Convening authorities of medical boards are directed to institute appropriate internal control and indoctrination measures that will reduce the incidence of errors and provide higher quality medical board reports in order to assist in the expeditious processing of cases. 🍀



United States Navy Medicine

CORRESPONDENCE AND CONTRIBUTIONS from the field are welcomed and will be published as space permits, subject to editing and possible abridgment. All material should be submitted to the Editor, U.S. Navy Medicine, Code 18, Bureau of Medicine and Surgery, Washington, D.C. 20390

NOTICES should be received not later than the third day of the month preceding the month of publication.

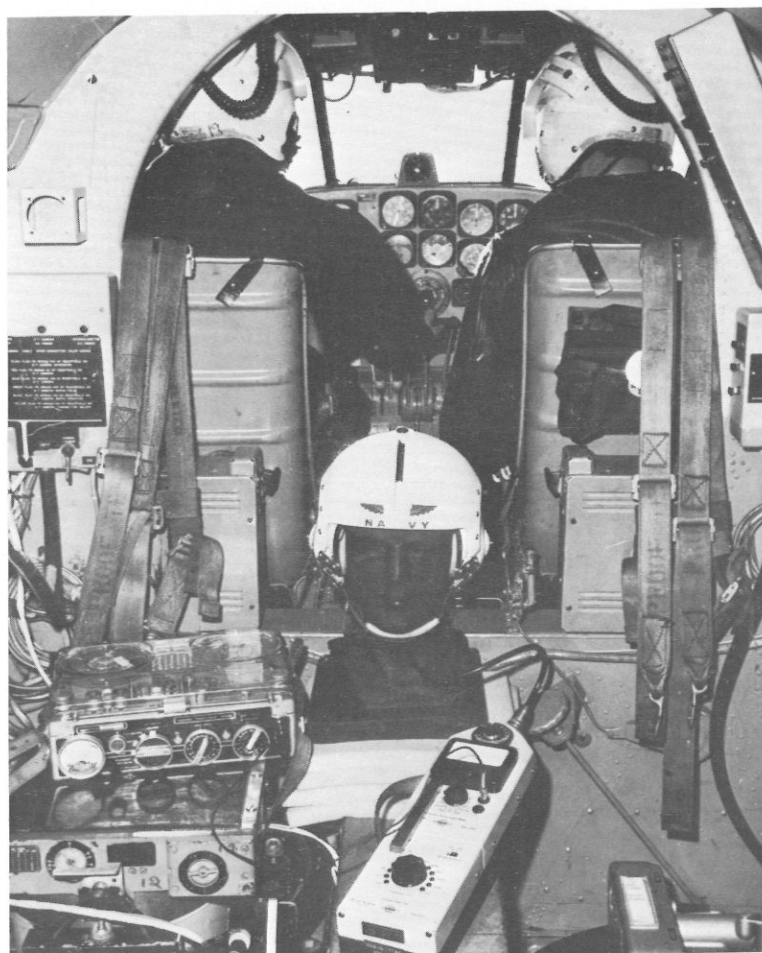
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SUGGESTIONS are invited concerning U.S. Navy Medicine, its content and form.

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"MIKE THE MANIKIN" . . . An artificial head developed by the Acoustical Sciences Division of the Naval Aerospace Medical Research Laboratory (NAMRL), Pensacola, Fla., plays a valuable role in evaluating the performance of flight helmets with respect to noise attenuation and speech intelligibility. The portability of the manikin, including its instrumentation, allows data to be obtained during actual aircraft operations. The Acoustical Sciences Division of NAMRL is concerned with the many forms of interaction between sound and man in Naval Aviation, as well as the conservation of hearing of all Navy personnel.—PAO, Naval Aerospace Medical Center, Pensacola, Fla.

U.S. NAVY MEDICINE